STATE OF UTAH  DEPARTMENT OF NATURAL RESOURCES  DIVISION OF OIL, GAS AND MINING										AMENDE	FOR D REPORT		
APPLICATION FOR PERMIT TO DRILL									1. WELL NAME and NUMBER 4X-5D-45 BTR				
2. TYPE O	F WORK	DRILL NEW WEI	LL REE	NTER P&	A WELL DEEPEN	WELL (			3. FIELD OR WILDCAT	r ALTAMC	DNT		
4. TYPE O	F WELL		Oil Well	Coalbe	d Methane Well: NO				5. UNIT or COMMUNIT	FIZATION A	GREEME	NT NAM	E
6. NAME C	F OPERATOR		BII	L BARRE	TT CORP		=		7. OPERATOR PHONE	303 312-	8164		
8. ADDRES	S OF OPERAT		099 18th Stree	t Ste 230	0, Denver, CO, 80202				9. OPERATOR E-MAIL BHilge	- ers@billbar	rettcorp.co	om	
	AL LEASE NUI , INDIAN, OR S				11. MINERAL OWNERS FEDERAL IND	HIP IAN 📵 STATE 🧐	) FI	EE ()	12. SURFACE OWNER:	SHIP DIAN 📵	STATE (	) FE	:E ( )
13. NAME		OWNER (if box 1	12 = 'fee')						14. SURFACE OWNER		f box 12 =		
15. ADDRI	ESS OF SURF	ACE OWNER (if b	ox 12 = 'fee')						16. SURFACE OWNER	R E-MAIL (i	f box 12 =	'fee')	
		R TRIBE NAME			18. INTEND TO COMMI		N FROM	1	19. SLANT				
(if box 12	= 'INDIAN') U	intah and Ouray			CC2	ommingling Applicati	on) N	10 📵	VERTICAL DIF	RECTIONAL	📵 но	RIZONT	AL 🔵
20. LOCA	TION OF WEL	L		FO	OTAGES	QTR-QTR	s	ECTION	TOWNSHIP	RAN	IGE	МЕ	RIDIAN
LOCATIO	N AT SURFAC	E		750 FN	L 1262 FWL	NWNW		5	4.0 S	5.0	W		U
Top of U	ppermost Pro	ducing Zone		810 FN	L 810 FWL	NWNW		5	4.0 S	5.0	W		U
At Total				810 FN	L 810 FWL	NWNW		5	4.0 S	5.0	W		U
21. COUN	TY	DUCHESNE			22. DISTANCE TO NEA	REST LEASE LINE (F 810	eet)		23. NUMBER OF ACRE	ES IN DRILL 640	ING UNIT		
					25. DISTANCE TO NEAI (Applied For Drilling of		POOL		26. PROPOSED DEPTI MD		VD: 8845		
27. ELEV	TION - GROU	ND LEVEL 5782			28. BOND NUMBER	UMBER  29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE 43-180			.E				
					Hole, Casing,	and Cement Info	rmati	on					
String	Hole Size	Casing Size	Length	Weigh					Cement		Sacks	Yield	Weight
COND	26	16	0 - 80	65.0	Unknown	8.8	-	11.112	No Used		0	0.0	0.0
SURF	12.25	9.625	0 - 1500	36.0	J-55 ST&C	8.8	₩,		n Light , Type Unkr Premium , Type Un		190 210	1.36	11.0
PROD	8.75	9.625	0 - 8878	17.0	P-110 LT&C	9.6	H	Tamburton	Unknown	KIIOWII	890	2.31	11.0
							$\top$		Unknown		680	1.42	13.5
					A <sup>-</sup>	TTACHMENTS							1
	VE	RIFY THE FOLL	OWING ARE	ATTAC	HED IN ACCORDAN	CE WITH THE UTA	AH OIL	AND GAS	CONSERVATION G	ENERAL	RULES		
<b>⊯</b> wi	ELL PLAT OR N	IAP PREPARED B	Y LICENSED S	URVEYO	R OR ENGINEER	<b>№</b> сом	COMPLETE DRILLING PLAN						
AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)						FORM	1 5. IF C	OPERATOR IS	OTHER THAN THE LE	EASE OWN	ER		
DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)  TOPOGRAPHICAL MAP													
NAME Venessa Langmacher TITLE Senior Permit Analyst								PHONE 303	312-8172				
SIGNATURE DATE 03/19/2013							EMAIL vlangi	macher@billbarrettcorp	o.com				
API NUMBER ASSIGNED APPROVAL 43013521040000								Permit	Manager				

# BILL BARRETT CORPORATION <u>DRILLING PLAN</u>

### 4X-5D-45 BTR

Lot 4 (NW NW), 750' FNL and 1262' FWL, Section 5, T4S-R5W, USB&M (surface hole) Lot 4 (NW NW), 810' FNL and 810' FWL, Section 5, T4S-R5W, USB&M (bottom hole) Duchesne County, Utah

# 1 - 2. <u>Estimated Tops of Geological Markers and Formations Expected to Contain Water, Oil and Gas and Other Minerals</u>

Formation	Depth – MD	Depth - TVD
Green River	3,006'	3,006'
Lower Green River*	5,162'	5,140'
Douglas Creek	6,062'	6,030'
Black Shale	6,878'	6,845'
Castle Peak	7,092'	7,060'
Uteland Butte	7,402'	7,370'
Wasatch*	7,762'	7,730'
TD	8,878'	8,845'

<sup>\*</sup>PROSPECTIVE PAY

The Wasatch and the Lower Green River are primary objectives for oil/gas.

Base of Useable Water = 289'

### 3. BOP and Pressure Containment Data

Depth Intervals BOP Equipment								
0 - 1,500	NU Diverter on conductor							
1,500' – TD	11" 5000# Ram Type BOP							
	11" 5000# Annular BOP							
- Drilling spool to a	- Drilling spool to accommodate choke and kill lines;							
- Ancillary equipme	ent and choke manifold rated at 5,000 psi. All BOP and BOPE tests will be in							
accordance with the	ne requirements of onshore Order No. 2;							
- The BLM and the	- The BLM and the State of Utah Division of Oil, Gas and Mining will be notified 24 hours in							
advance of all BOP pressure tests.								
- BOP hand wheels may be underneath the sub-structure of the rig if the drilling rig used is set up								
To operate most efficiently in this manner.								

### 4. <u>Casing Program</u>

Hole Size	SETTING DEPTH		Casing	Casing	Casing		
	(FROM)	<u>(TO)</u>	Size	Weight	<u>Grade</u>	<b>Thread</b>	Condition
26"	Surface	80'	16"	65#			
12 1/4"	Surface	1,500'	9 5/8"	36#	J or K 55	ST&C	New
8 3/4"	Surface	TD	5 1/2"	17#	P-110	LT&C	New

Bill Barrett Corporation Drilling Program 4X-5D-45 BTR Duchesne County, Utah

### 5. <u>Cementing Program</u>

16" Conductor Casing	Grout
9 5/8" Surface Casing	Lead: 190 sx Halliburton Light Premium with additives
	mixed at 11.0 ppg (yield = $3.16 \text{ ft}^3/\text{sx}$ ) circulated to surface
	with 75% excess. TOC @ Surface
	Tail: 210 sx Halliburton Premium Plus cement with
	additives mixed at 14.8 ppg (yield = $1.36 \text{ ft}^3/\text{sx}$ ), calculated
	hole volume with 75% excess. TOC @ 1,000'
5 ½" Production Casing	Lead: 890 sx Tuned Light cement with additives mixed at
	11.0 ppg (yield = $2.31 \text{ ft}^3/\text{sx}$ ). TOC @ 1,000'
	Tail: 680 sx Halliburton Econocem cement with additives
	mixed at 13.5 ppg (yield = $1.42 \text{ ft}^3/\text{sx}$ ). Top of cement to
	be determined by log and sample evaluation; estimated TOC
	@ 6,378'

### 6. Mud Program

<u>Interval</u>	Weight	Viscosity	Fluid Loss (API filtrate)	<u>Remarks</u>
0'-80'	8.3 - 8.8	26 - 36	NC	Freshwater Spud Mud Fluid
				System
80' – 1,500'	9.5 - 10.0	26 - 36	NC	Freshwater Spud Mud Fluid
				System
1,500' – TD	9.0 - 9.6	42-52	20 cc or less	DAP Polymer Fluid System

Note: Sufficient mud materials to maintain mud properties, control lost circulation and to contain "kicks" will be available at wellsite. BBC may require minor amounts of diesel to be added to its fluid system in order to reduce torque and drag.

### 7. Testing, Logging and Core Programs

Cores	None anticipated;
Testing	None anticipated; drill stem tests may be run on shows of interest;
Sampling	30' to 50' samples; surface casing to TD. Preserve samples all show intervals;
Surveys	MWD as needed to land wellbore;
Logging	DIL-GR-SP, FDC-CNL-GR-CALIPER-Pe-Microlog, Sonic-GR (all TD to surface).
	FMI & Sonic Scanner to be run at geologist's discretion.

### 8. <u>Anticipated Abnormal Pressures or Temperatures</u>

No abnormal pressures or temperatures or other hazards are anticipated.

Maximum anticipated bottom hole pressure equals approximately 4400 psi\* and maximum anticipated surface pressure equals approximately 2460 psi\*\* (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

<sup>\*</sup>Max Mud Wt x 0.052 x TVD = A (bottom hole pressure)

<sup>\*\*</sup>Maximum surface pressure = A - (0.22 x TVD)

Bill Barrett Corporation Drilling Program 4X-5D-45 BTR Duchesne County, Utah

### 9. Auxiliary Equipment

- a) Upper kelly cock; lower Kelly cock will be installed while drilling
- b) Inside BOP or stab-in valve (available on rig floor)
- c) Safety valve(s) and subs to fit all string connections in use Mud monitoring will be visually observed

### 10. Location and Type of Water Supply

Water for the drilling and completion will be trucked from the Duchesne City Culinary Water Dock located in Sec. 1, T4S, R5W water right number 43-180.

### 11. <u>Drilling Schedule</u>

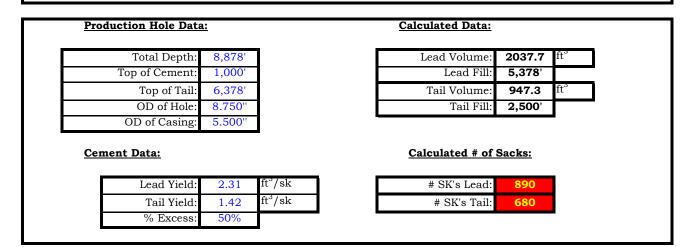
Spud: March 22, 2013
Duration: 15 days drilling time 6 days completion time

RECEIVED: March 19, 2013



### LAKE CANYON & BLACK TAIL RIDGE CEMENT VOLUMES

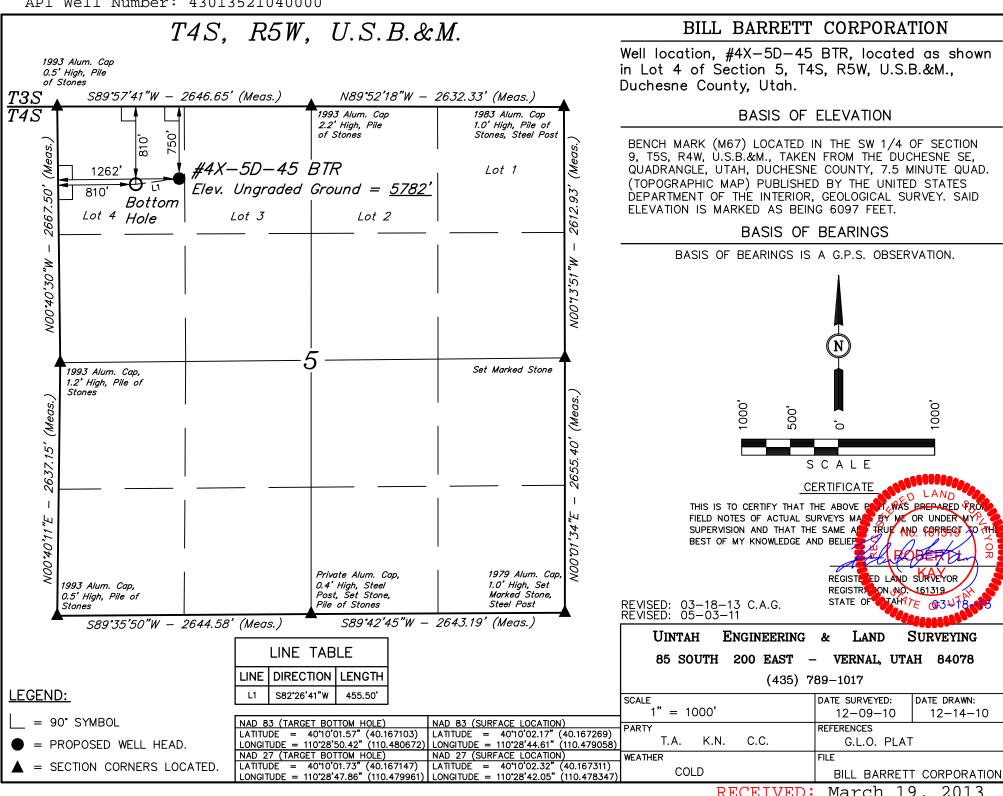
Well Name: 4X-5D-45 BTR Surface Hole Data: **Calculated Data:** 1,500' Total Depth: Lead Volume: 548.1 1,000' Top of Cement 0' Lead Fill: OD of Hole: 12.250" Tail Volume: 274.0 OD of Casing: Tail Fill: 500' 9.625' Calculated # of Sacks: **Cement Data:** ft°/sk Lead Yield: 3.16 # SK's Lead: % Excess: 75% Top of Lead: 0' Tail Yield: 1.36 ft³/sk # SK's Tail: % Excess: 75% Top of Tail: 1,000'



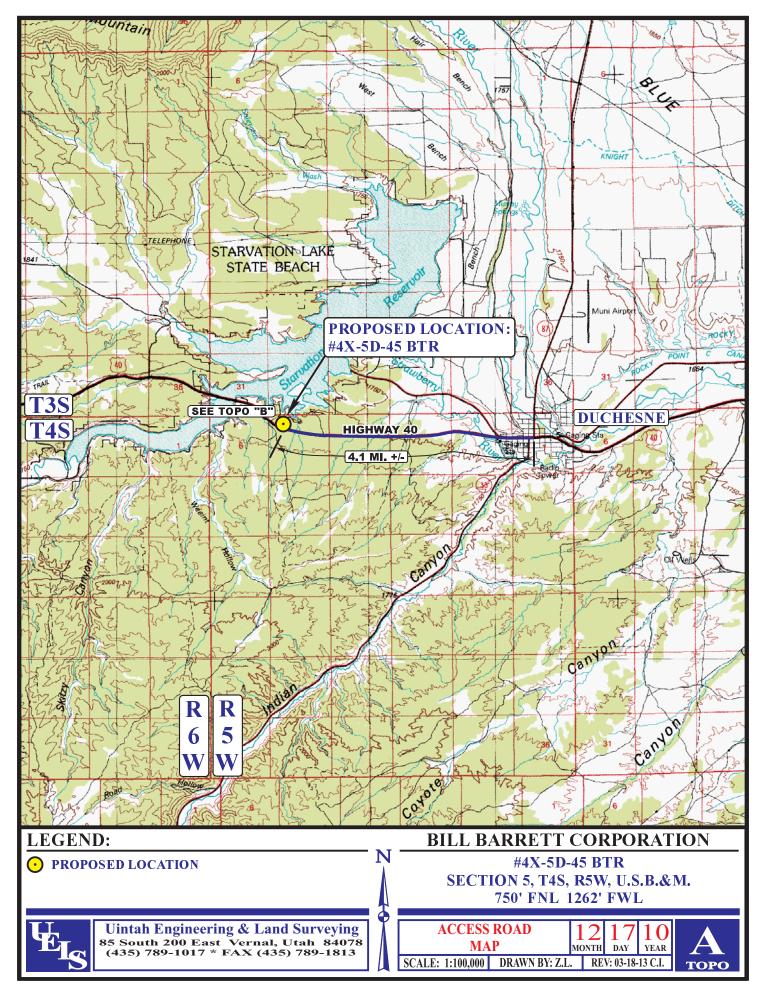
# 4X-5D-45 BTR Proposed Cementing Program

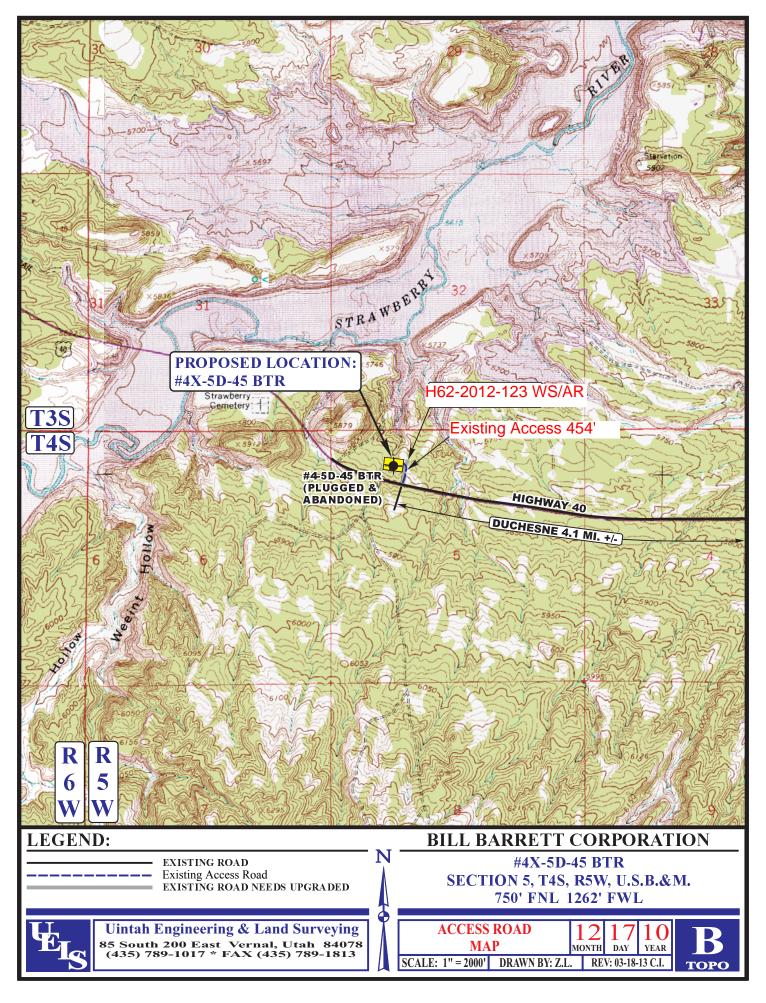
Job Recommendation		Sur	face Casing
Lead Cement - (1000' - 0')			
Halliburton Light Premium	Fluid Weight:	11.0	lbm/gal
5.0 lbm/sk Silicalite Compacted	Slurry Yield:	3.16	ft <sup>3</sup> /sk
0.25 lbm/sk Kwik Seal	Total Mixing Fluid:	19.48	Gal/sk
0.125 lbm/sk Poly-E-Flake	Top of Fluid:	0'	
2.0% Bentonite	Calculated Fill:	1,000'	
	Volume:	97.61	bbl
	Proposed Sacks:	190	sks
Tail Cement - (TD - 1000')			
Premium Cement	Fluid Weight:	14.8	lbm/gal
2.0% Calcium Chloride	Slurry Yield:	1.36	ft³/sk
	Total Mixing Fluid:	6.37	Gal/sk
	Top of Fluid:	1,000'	
	Calculated Fill:	500'	
	Volume:	48.80	bbl
	<b>Proposed Sacks:</b>	210	sks

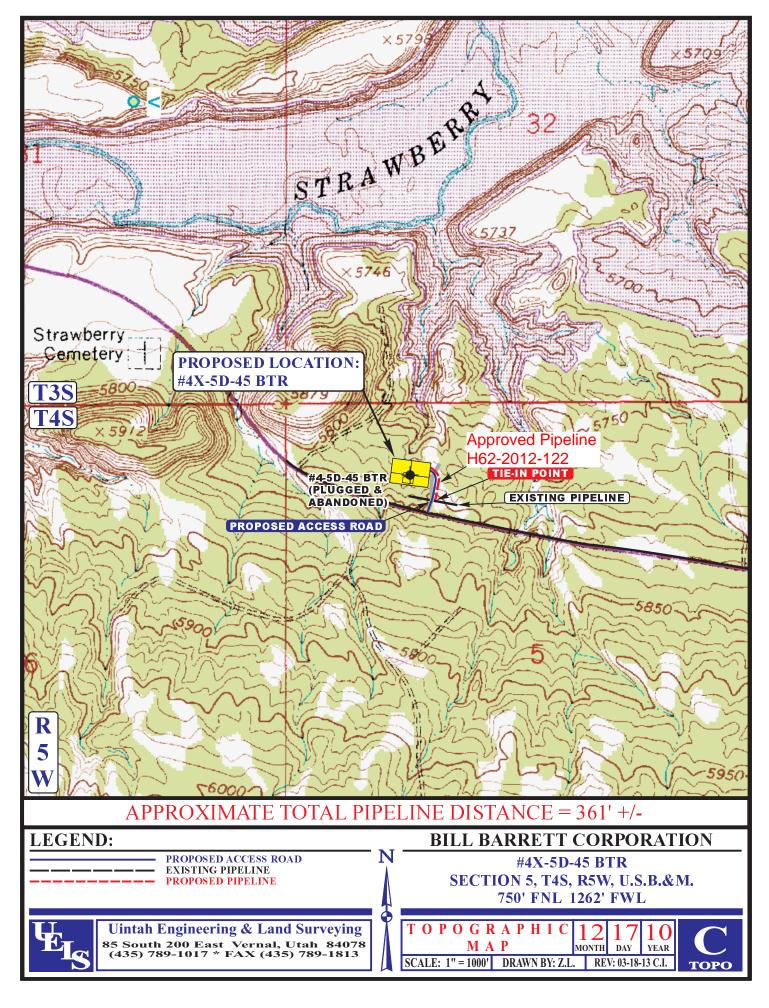
Job Recommendation		Produc	tion Casing
Lead Cement - (6378' - 1000')			
Tuned Light <sup>™</sup> System	Fluid Weight:	11.0	lbm/gal
	Slurry Yield:	2.31	ft <sup>3</sup> /sk
	Total Mixing Fluid:	10.65	Gal/sk
	Top of Fluid:	1,000'	
	Calculated Fill:	5,378'	
	Volume:	362.90	bbl
	Proposed Sacks:	890	sks
Tail Cement - (8878' - 6378')			
Econocem <sup>TM</sup> System	Fluid Weight:	13.5	lbm/gal
0.125 lbm/sk Poly-E-Flake	Slurry Yield:	1.42	ft <sup>3</sup> /sk
1.0 lbm/sk Granulite TR 1/4	Total Mixing Fluid:		Gal/sk
	Top of Fluid:	6,378'	
	Calculated Fill:	2,500'	
	Volume:	168.71	bbl
	Proposed Sacks:	680	sks

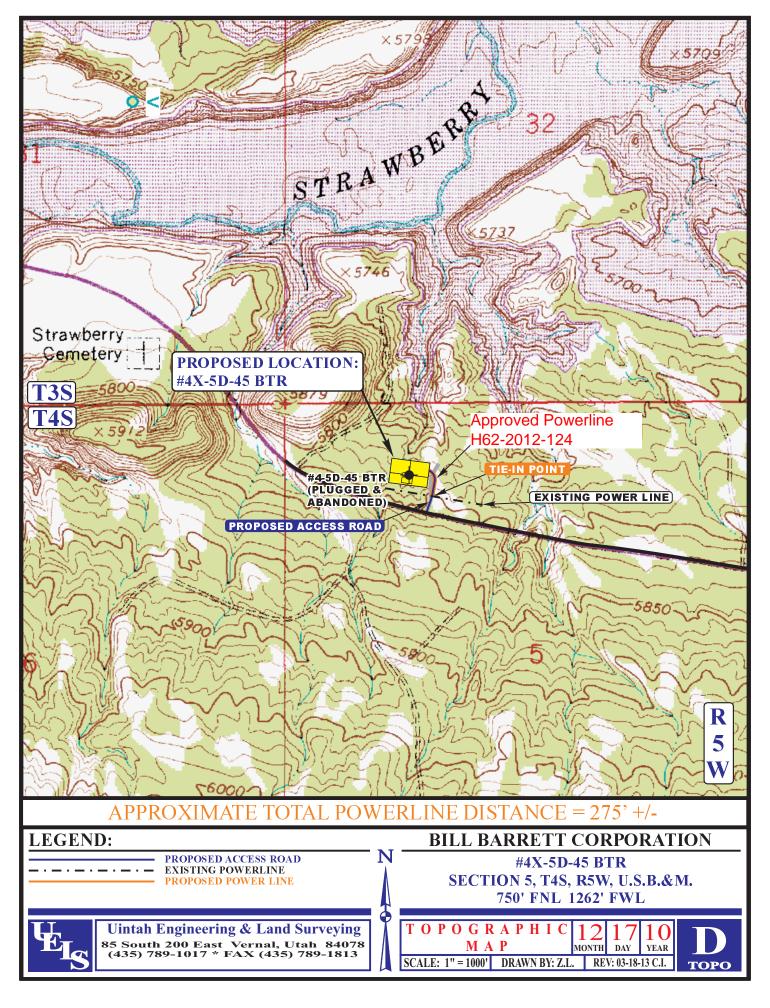


RECEIVED: March 19, 2013











**COMPANY DETAILS: BILL BARRETT CORP** 

Calculation Method: Minimum Curvature

Error System: ISCWSA

Scan Method: Closest Approach 3D Error Surface: Elliptical Conic Warning Method: Error Ratio SITE DETAILS: 4X-5D-45 BTR Blacktail Ridge

Site Latitude: 40° 10′ 2.320 N Site Longitude: 110° 28′ 42.049 W

Positional Uncertainity: 0.0 Convergence: 0.65 Local North: True

WELL DETAILS: 4X-5D-45 BTR

Ground Level: 5773.0

+N/-S +E/-W Northing Easting Latitude Longitude Slot 0.0 0.0 669619.15 2285506.80 40° 10' 2.319 N 110° 28' 42.049 W

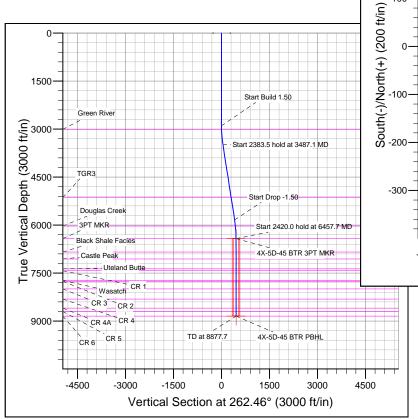
WELLBORE TARGET DETAILS (LAT/LONG)								
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape		
4X-5D-45 BTR 3PT MKR	6425.0	-59.7	-451.1	40° 10' 1.729 N	110° 28' 47.860 W	Rectangle (Sides: L200.0 W200.0)		
4X-5D-45 BTR PBHL	8845.0	-59.7	-451.1	40° 10' 1.729 N	110° 28' 47.860 W	Rectangle (Sides: L200.0 W200.0)		

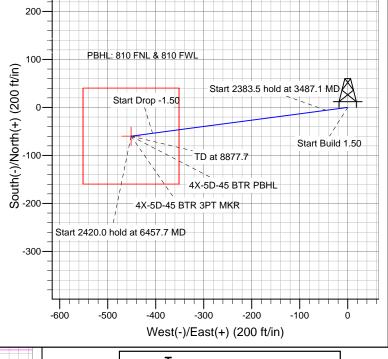
	SECTION DETAILS										
Se	ec N	МD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	(	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	-
2	290	0.0	0.00	0.00	2900.0	0.0	0.0	0.00	0.00	0.0	
3	348	7.1	8.81 2	262.46	3484.8	-5.9	-44.6	1.50	262.46	45.0	
4	587	0.6	8.81 2	262.46	5840.2	-53.8	-406.4	0.00	0.00	410.0	
5	645	7.7	0.00	0.00	6425.0	-59.7	-451.1	1.50	180.00	455.0	4X-5D-45 BTR 3PT MKR
6	887	7.7	0.00	0.00	8845.0	-59.7	-451.1	0.00	0.00	455.0	4X-5D-45 BTR PBHL

FORMATION TOP DETAILS								
TVDPath	MDPath	Formation						
3006.0	3006.0	Green River						
5140.0	5162.1	TGR3						
6030.0	6062.0	Douglas Creek						
6425.0	6457.7	3PT MKR						
6845.0	6877.7	Black Shale Facies						
7060.0	7092.7	Castle Peak						
7370.0	7402.7	Uteland Butte						
7430.0	7462.7	CR 1						
7730.0	7762.7	Wasatch						
7755.0	7787.7	CR 2						
7995.0	8027.7	CR 3						
8315.0	8347.7	CR 4						
8595.0	8627.7	CR 4A						
8700.0	8732.7	CR 5						
8845.0	8877.7	CR 6						

### CASING DETAILS

No casing data is available





Azimuths to True North Magnetic North: 11.27°

Magnetic Field Strength: 52101.3snT Dip Angle: 65.77°
Date: 3/19/2013 Model: IGRF2010

### Planning Report

Database: Compass

Company: BILL BARRETT CORP

Project: DUCHESNE COUNTY, UT (NAD 27)

 Site:
 4X-5D-45 BTR

 Well:
 4X-5D-45 BTR

 Wellbore:
 Wellbore #1

 Design:
 Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:

North Reference: Survey Calculation Method: Well 4X-5D-45 BTR

KB @ 5795.0ft (Original Well Elev) KB @ 5795.0ft (Original Well Elev)

True

Minimum Curvature

Project DUCHESNE COUNTY, UT (NAD 27)

Map System: US State Plane 1927 (Exact solution)

Geo Datum: NAD 1927 (NADCON CONUS)

Map Zone: Utah Central 4302

System Datum: Ground Level

Site 4X-5D-45 BTR

Northing: 669,619.16 ft Site Position: Latitude: 40° 10' 2.320 N Easting: 2,285,506.80 ft 110° 28' 42.049 W From: Lat/Long Longitude: 0.65 ° **Position Uncertainty:** 0.0 ft Slot Radius: **Grid Convergence:** 

Well 4X-5D-45 BTR

 Well Position
 +N/-S
 0.0 ft
 Northing:
 669,619.15 ft
 Latitude:
 40° 10' 2.319 N

 +E/-W
 0.0 ft
 Easting:
 2,285,506.80 ft
 Longitude:
 110° 28' 42.049 W

Position Uncertainty0.0 ftWellhead Elevation:ftGround Level:5,773.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/19/2013	11.27	65.77	52,101

Design #1 Design Audit Notes: Version: Phase: **PLAN** Tie On Depth: 0.0 Depth From (TVD) +N/-S **Vertical Section:** +E/-W Direction (ft) (ft) (ft) (°) 0.0 262.46 0.0 0.0

lan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,487.1	8.81	262.46	3,484.8	-5.9	-44.6	1.50	1.50	0.00	262.46	
5,870.6	8.81	262.46	5,840.2	-53.8	-406.4	0.00	0.00	0.00	0.00	
6,457.7	0.00	0.00	6,425.0	-59.7	-451.1	1.50	-1.50	0.00	180.00	4X-5D-45 BTR 3PT N
8,877.7	0.00	0.00	8,845.0	-59.7	-451.1	0.00	0.00	0.00	0.00	4X-5D-45 BTR PBHL

Planning Report

Database: Compass

Company: BILL BARRETT CORP

Project: DUCHESNE COUNTY, UT (NAD 27)

 Site:
 4X-5D-45 BTR

 Well:
 4X-5D-45 BTR

 Wellbore:
 Wellbore #1

 Design:
 Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Well 4X-5D-45 BTR

KB @ 5795.0ft (Original Well Elev) KB @ 5795.0ft (Original Well Elev)

True

sign:	Design #1								
nned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0		0.0	0.0	0.00		0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 1	1.50								
Otal t Balla 1									
3,000.0	1.50	262.46	3,000.0	-0.2	-1.3	1.3	1.50	1.50	0.00
3,006.0	1.59	262.46	3,006.0	-0.2	-1.5	1.5	1.50	1.50	0.00
Green River									
3,100.0	3.00	262.46	3,099.9	-0.7	-5.2	5.2	1.50	1.50	0.00
3,200.0	4.50	262.46	3,199.7	-0.7 -1.5	-11.7	11.8	1.50	1.50	0.00
3,300.0	6.00	262.46	3,199.7	-1.5 -2.7	-20.7	20.9	1.50	1.50	0.00
3,300.0	0.00	∠0∠.40	3,299.3	-2.1	-20.7	20.9	1.50	1.50	0.00
3,400.0	7.50	262.46	3,398.6	-4.3	-32.4	32.7	1.50	1.50	0.00
3,487.1	8.81	262.46	3,484.8	-5.9	-44.6	45.0	1.50	1.50	0.00
	hold at 3487.1 M								
3.500.0	8.81	262.46	3,497.5	6.0	46.6	47.0	0.00	0.00	0.00
-,			,	-6.2	-46.6		0.00		
3,600.0	8.81	262.46	3,596.4	-8.2	-61.8	62.3	0.00	0.00	0.00
3,700.0	8.81	262.46	3,695.2	-10.2	-77.0	77.6	0.00	0.00	0.00
3.800.0	8.81	262.46	3,794.0	-12.2	-92.1	92.9	0.00	0.00	0.00
3,900.0	8.81	262.46	3,892.8	-14.2	-107.3	108.2	0.00	0.00	0.00
4,000.0	8.81	262.46	3,991.6	-14.2 -16.2	-107.5	123.6	0.00	0.00	0.00
4,100.0	8.81	262.46	4,090.5	-18.2	-137.7	138.9	0.00	0.00	0.00
4,200.0	8.81	262.46	4,189.3	-20.2	-152.8	154.2	0.00	0.00	0.00
4,300.0	8.81	262.46	4,288.1	-22.2	-168.0	169.5	0.00	0.00	0.00
4,400.0	8.81	262.46	4,386.9	-24.3	-183.2	184.8	0.00	0.00	0.00
4,500.0	8.81	262.46	4,485.7	-26.3	-198.4	200.1	0.00	0.00	0.00
4,600.0	8.81	262.46	4,584.6	-28.3	-213.6	215.4	0.00 0.00	0.00 0.00	0.00
4,700.0	8.81	262.46	4,683.4	-30.3	-228.7	230.7			0.00

Planning Report

Database: Compass

Company: BILL BARRETT CORP

Project: DUCHESNE COUNTY, UT (NAD 27)

 Site:
 4X-5D-45 BTR

 Well:
 4X-5D-45 BTR

 Wellbore:
 Wellbore #1

 Design:
 Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well 4X-5D-45 BTR

KB @ 5795.0ft (Original Well Elev) KB @ 5795.0ft (Original Well Elev)

True

n:	Design #1								
ned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,800.0	0 8.81	262.46	4,782.2	-32.3	-243.9	246.0	0.00	0.00	0.00
4,900.0	8.81	262.46	4,881.0	-34.3	-259.1	261.4	0.00	0.00	0.00
5,000.0	8.81	262.46	4,979.9	-36.3	-274.3	276.7	0.00	0.00	0.00
5,100.0		262.46	5,078.7	-38.3	-289.4	292.0	0.00	0.00	0.00
5,162.	1 8.81	262.46	5,140.0	-39.6	-298.9	301.5	0.00	0.00	0.00
TGR3									
5,200.0	0 8.81	262.46	5,177.5	-40.3	-304.6	307.3	0.00	0.00	0.00
5,300.0		262.46	5,276.3	-42.3	-319.8	322.6	0.00	0.00	0.00
5,400.0		262.46	5,375.1	-44.4	-335.0	337.9	0.00	0.00	0.00
5,500.0		262.46	5,474.0	-46.4	-350.2	353.2	0.00	0.00	0.00
5,600.0		262.46	5,572.8	-48.4	-365.3	368.5	0.00	0.00	0.00
								0.00	0.00
5,700.0		262.46	5,671.6	-50.4	-380.5	383.8	0.00	0.00	0.00
5,800.0 5,870.0		262.46 262.46	5,770.4 5,840.2	-52.4 -53.8	-395.7 -406.4	399.1 410.0	0.00 0.00	0.00 0.00	0.00 0.00
		202.40	5,040.2	-55.0	-400.4	410.0	0.00	0.00	0.00
Start Drop 5,900.0		262.46	5,869.3	-54.4	-410.8	414.3	1.50	-1.50	0.00
6,000.0		262.46 262.46	5,968.4	-54.4 -56.1	-410.6 -423.9	414.3 427.6	1.50	-1.50 -1.50	0.00
6,062.0	5.94	262.46	6,030.0	-57.0	-430.8	434.5	1.50	-1.50	0.00
Douglas (									
6,100.0		262.46	6,067.8	-57.5	-434.5	438.3	1.50	-1.50	0.00
6,200.0		262.46	6,167.5	-58.6	-442.4	446.3	1.50	-1.50	0.00
6,300.0		262.46	6,267.3	-59.3	-447.8	451.7	1.50	-1.50	0.00
6,400.0	0.87	262.46	6,367.3	-59.7	-450.6	454.6	1.50	-1.50	0.00
6,457.	7 0.00	0.00	6,425.0	-59.7	-451.1	455.0	1.50	-1.50	0.00
Start 2420	0.0 hold at 6457.7 N	ID - 3PT MKR							
6,500.0		0.00	6,467.3	-59.7	-451.1	455.0	0.00	0.00	0.00
6,600.0		0.00	6,567.3	-59.7	-451.1	455.0	0.00	0.00	0.00
6,700.0		0.00	6,667.3	-59.7	-451.1	455.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,767.3	-59.7	-451.1	455.0	0.00	0.00	0.00
6,877.	7 0.00	0.00	6,845.0	-59.7	-451.1	455.0	0.00	0.00	0.00
Black Sha	le Facies								
6,900.0	0.00	0.00	6,867.3	-59.7	-451.1	455.0	0.00	0.00	0.00
7,000.0		0.00	6,967.3	-59.7	-451.1	455.0	0.00	0.00	0.00
7,092.	7 0.00	0.00	7,060.0	-59.7	-451.1	455.0	0.00	0.00	0.00
Castle Pe	ak								
7,100.0	0.00	0.00	7,067.3	-59.7	-451.1	455.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7.167.3	-59.7	-451.1	455.0	0.00	0.00	0.00
7,300.0		0.00	7,267.3	-59.7	-451.1	455.0	0.00	0.00	0.00
7,400.0		0.00	7,367.3	-59.7	-451.1	455.0	0.00	0.00	0.00
7,402.		0.00	7,370.0	-59.7	-451.1	455.0	0.00	0.00	0.00
Uteland B									
7,462.		0.00	7,430.0	-59.7	-451.1	455.0	0.00	0.00	0.00
CR 1			,						
7,500.0		0.00	7,467.3	-59.7	-451.1	455.0	0.00	0.00	0.00
7,600.0		0.00	7,567.3	-59.7	-451.1	455.0	0.00	0.00	0.00
7,700.0		0.00	7,667.3	-59.7	-451.1	455.0	0.00	0.00	0.00
7,762.	7 0.00	0.00	7,730.0	-59.7	-451.1	455.0	0.00	0.00	0.00
Wasatch	7 000	0.00	7.755.0	FC =	454.4	455.0	0.00	0.00	0.00
7,787.	7 0.00	0.00	7,755.0	-59.7	-451.1	455.0	0.00	0.00	0.00
CR 2									
7,800.0	0.00	0.00	7,767.3	-59.7	-451.1	455.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,867.3	-59.7	-451.1	455.0	0.00	0.00	0.00
8,000.8	0.00	0.00	7,967.3	-59.7	-451.1	455.0	0.00	0.00	0.00

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 4X-5D-45 BTR

 Well:
 4X-5D-45 BTR

 Wellbore:
 Wellbore #1

 Design:
 Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Well 4X-5D-45 BTR

KB @ 5795.0ft (Original Well Elev) KB @ 5795.0ft (Original Well Elev)

True

ned Survey									
Measured Depth (ft)	Inclination Azimuth Dept		Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,027.7	0.00	0.00	7,995.0	-59.7	-451.1	455.0	0.00	0.00	0.00
<b>CR 3</b> 8,100.0	0.00	0.00	8,067.3	-59.7	-451.1	455.0	0.00	0.00	0.00
8,200.0 8,300.0 8,347.7	0.00 0.00 0.00	0.00 0.00 0.00	8,167.3 8,267.3 8,315.0	-59.7 -59.7 -59.7	-451.1 -451.1 -451.1	455.0 455.0 455.0	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
CR 4									
8,400.0 8,500.0	0.00 0.00	0.00 0.00	8,367.3 8,467.3	-59.7 -59.7	-451.1 -451.1	455.0 455.0	0.00 0.00	0.00 0.00	0.00 0.00
8,600.0 8,627.7	0.00 0.00	0.00 0.00	8,567.3 8,595.0	-59.7 -59.7	-451.1 -451.1	455.0 455.0	0.00 0.00	0.00 0.00	0.00 0.00
CR 4A									
8,700.0 8,732.7	0.00 0.00	0.00 0.00	8,667.3 8,700.0	-59.7 -59.7	-451.1 -451.1	455.0 455.0	0.00 0.00	0.00 0.00	0.00 0.00
CR 5									
8,800.0	0.00	0.00	8,767.3	-59.7	-451.1	455.0	0.00	0.00	0.00
8,877.7	0.00	0.00	8,845.0	-59.7	-451.1	455.0	0.00	0.00	0.00
TD at 8877.7	- CR 6								

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
4X-5D-45 BTR PBHL - plan hits target - Rectangle (sides V	0.00 V200.0 H200.0	0.00 D0.0)	8,845.0	-59.7	-451.1	669,554.28	2,285,056.46	40° 10' 1.729 N	110° 28' 47.860 W
4X-5D-45 BTR 3PT MKF - plan hits target - Rectangle (sides V		0.00 D2,420.0)	6,425.0	-59.7	-451.1	669,554.28	2,285,056.46	40° 10' 1.729 N	110° 28' 47.860 W

Planning Report

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Company: BILL BARRETT CORP

Project: DUCHESNE COUNTY, UT (NAD 27)

 Site:
 4X-5D-45 BTR

 Well:
 4X-5D-45 BTR

 Wellbore:
 Wellbore #1

 Design:
 Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference: Survey Calculation Method: Well 4X-5D-45 BTR

KB @ 5795.0ft (Original Well Elev) KB @ 5795.0ft (Original Well Elev)

True

Formations						
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	3,006.0	3,006.0	Green River		0.00	
	5,162.1	5,140.0	TGR3		0.00	
	6,062.0	6,030.0	Douglas Creek		0.00	
	6,457.7	6,425.0	3PT MKR		0.00	
	6,877.7	6,845.0	Black Shale Facies		0.00	
	7,092.7	7,060.0	Castle Peak		0.00	
	7,402.7	7,370.0	Uteland Butte		0.00	
	7,462.7	7,430.0	CR 1		0.00	
	7,762.7	7,730.0	Wasatch		0.00	
	7,787.7	7,755.0	CR 2		0.00	
	8,027.7	7,995.0	CR 3		0.00	
	8,347.7	8,315.0	CR 4		0.00	
	8,627.7	8,595.0	CR 4A		0.00	
	8,732.7	8,700.0	CR 5		0.00	
	8,877.7	8,845.0	CR 6		0.00	

Plan Annotations				
Measure	d Vertical	Local Coord	dinates	
Depth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
2,900	2,900.0	0.0	0.0	Start Build 1.50
3,487	'.1 3,484.8	-5.9	-44.6	Start 2383.5 hold at 3487.1 MD
5,870	5,840.2	-53.8	-406.4	Start Drop -1.50
6,457	7.7 6,425.0	-59.7	-451.1	Start 2420.0 hold at 6457.7 MD
8,877	7.7 8,845.0	-59.7	-451.1	TD at 8877.7

### **SURFACE USE PLAN**



### **BILL BARRETT CORPORATION**

### 4X-5D-45 BTR Well Pad

Lot 4 (NW NW), 750' FNL and 1262' FWL, Section 5, T4S-R5W, USB&M (surface hole) Lot 4 (NW NW), 810' FNL and 810' FWL, Section 5, T4S-R5W, USB&M (bottom hole) Duchesne County, Utah

# This well is being drilled 30' west of the plugged and abandoned 4-5D-45 BTR. No additional disturbance is needed.

The onsite inspection for this pad occurred on August 18, 2011. Site specific conditions or changes as a result of that onsite are indicated below. Plat changes requested at the onsite are reflected within this APD.

- a) BBC committed to closed-loop drilling because of close proximity to Starvation Reservoir;
- b) Initial site moved to the current site to avoid cultural resources;

The excavation contractor would be provided with an approved copy of the surface use plan of operations before initiating construction.

### 1. <u>Existing Roads:</u>

- a. The proposed well site is located approximately 4.2 miles west of Duchesne, Utah. Maps and directions reflecting the route to the proposed well site are included (see Topographic maps A and B).
- b. The existing State Highway 40 would be utilized from Duchesne for 4.1 miles to an existing approach that provides access to the planned new access road.
- c. Project roads would require routine year-round maintenance to provide year-round access. Maintenance would include inspections, reduction of ruts and holes, maintenance to keep water off the road, replacement of surfacing materials, and clearing of sediment blocking ditches and culverts. Should snow removal become necessary, roads would be cleared with a motor grader and snow would be stored along the down gradient side to prohibit runoff onto the road. Aggregate would be used as necessary to maintain a solid running surface and minimize dust generation.
- d. Vehicle operators would obey posted speed restrictions and observe safe speeds commensurate with road and weather conditions. Travel would be limited to the existing access roads and proposed access road.
- e. The use of roads under State and Duchesne County Road Department maintenance are necessary to access the project area with no improvements proposed. A Utah Department of Transportation road encroachment is required for this project and is approved.

Bill Barrett Corporation Surface Use Plan #4X-5D-45 BTR Duchesne County, UT

f. All existing roads would be maintained and kept in good repair during all phases of operation.

### 2. Planned Access Road:

- a. All access roads are existing (see Topographic Map B). The access road crosses entirely Ute Tribe surface.
- b. The access road is constructed with a 30-foot ROW width and an 18-foot travel surface. See section 12.d. below for disturbance estimates.
- c. Road improvements of existing roads would typically require the use of motor graders, crawler tractors, 10-yard end dump trucks, and water trucks. The standard methodology for building new roads involves the use of a crawler tractor or track hoe to windrow the vegetation to one side of the road corridor, remove topsoil to the opposing side of the corridor, and rough-in the roadway. This is followed by a grader or bulldozer to establish barrow ditches and crown the road surface. Where culverts are required, a track hoe or backhoe would trench the road and install the culverts. Some hand labor would be required when installing and armoring culverts. Road base or gravel in some instances would be necessary and would be hauled in and a grader used to smooth the running surface.
- d. The road is constructed to facilitate drainage, control erosion and minimize visual impacts by following natural contours where practical. No unnecessary side-casting of material would occur on steep slopes.
- e. A maximum grade of 10% would be maintained throughout the project with minimum cuts and fills, as necessary, to access the well.
- f. Excess rock from construction of the pad may be used for surfacing of the access road if necessary. Any additional aggregate necessary would be obtained from private or State of Utah lands in conformance with applicable regulations. Aggregate would be of sufficient size, type, and amount to allow all weather access and alleviate dust.
- g. Where topsoil removal is necessary, it would be windrowed (i.e. stockpiled/accumulated along the edge of the ROW and in a low row/pile parallel with the ROW) and re-spread over the disturbed area after construction and backfilling are completed. Vegetation removed from the disturbed area would also be re-spread to provide protection, nutrient recycling, and a seed source for reclamation.
- h. Turnouts are not proposed.
- i. No culverts or low-water crossings are anticipated. Adequate drainage structures, where necessary, would be incorporated into the remainder of the road to prevent soil erosion and accommodate all-weather traffic.

Bill Barrett Corporation Surface Use Plan #4X-5D-45 BTR Duchesne County, UT

- j. Surface disturbance and vehicular travel would be limited to the approved location access road. Adequate signs would be posted, as necessary, to warn the public of project related traffic.
- k. All access roads and surface disturbing activities would conform to the appropriate standard, **no higher than necessary**, to accommodate their intended function adequately as outlined in the Bureau of Land Management and Forest Service publication: <u>Surface Operating Standards for Oil and Gas Exploration</u> and Development, Fourth Edition Revised 2007.
- 1. The operator would be responsible for all maintenance needs of the new access road.

### 3. <u>Location of Existing Wells (see One-Mile Radius Map):</u>

a. Following is a list of wells with surface hole locations within a one-mile radius of the proposed pad:

i.	water wells	none
ii.	injection wells	none
iii.	disposal wells	none
iv.	drilling wells	none
v.	temp shut-in wells	none
vi.	producing wells	four
vii.	abandoned wells	two

### 4. <u>Location of Production Facilities</u>

- a. Surface facilities would consist of a wellhead, separator, gas meter, combustor, (1) 500 gal methanol tank, (1) 500 glycol tank, (3) 500 bbl oil tanks, (1) 500 bbl water tank, (1) 500 bbl test tank, (1) 1000 gal propane tank, a pumping unit or Roto-flex unit or ESP or gas lift unit, electrical or with a natural gas or diesel fired motor, solar panels, solar chemical and methanol pumps and one trace pump. See attached proposed facility diagram.
- b. Most wells would be fitted with a pump jack or Roto-flex unit or ESP or gas lift to assist liquid production. The prime mover for pump jacks or Roto-flex units would be small (100 horsepower or less), electric motor or natural gas or diesel fired internal combustion engines. If a gas lift is installed, it would be set on a 10 ft x 25 ft pad and the prime mover would be a natural gas-fired internal combustion engine rated at 200 horsepower or less or an electric compressor of similar horsepower powered by electricity.
- c. The tank battery would be surrounded by a secondary containment berm of sufficient capacity to contain 1.1 times the entire capacity of the largest single tank and sufficient freeboard to contain precipitation. All loading lines and valves would be placed inside the berm surrounding the tank battery or would

Bill Barrett Corporation Surface Use Plan #4X-5D-45 BTR Duchesne County, UT

utilize catchment basins to contain spills. All liquid hydrocarbon production and measurement shall conform to the provisions of 43 CFR 3162.7-2 and Onshore Oil and Gas Order No. 4 for the measurement of oil.

- d. Gas meter run(s) would be constructed and located on lease within 500 feet of the wellheads. Meter runs would be housed and/or fenced. As practicably feasible, meters would be equipped with remote telemetry monitoring systems. All gas production and measurement shall comply with the provisions of 43 CFR 3162.7-3, Onshore Oil and Gas Order No. 5, and American Gas Association (AGA) Report No. 3.
- e. A combustor may be installed at this location for control of associated condensate tank emissions. A combustor ranges from 24 inches to 48 inches wide and is approximately 27 ft tall. Combustor placement would be on existing disturbance.
- f. Approximately 361 feet of pipeline corridor (previously approved) see Topographic Map C, containing up to three lines (one gas pipeline up to 8 inch in diameter, one water line up to 4 inch in diameter and one residue line up to 4 inch in diameter) is approved, trending south to the existing BTR pipeline corridor. Pipelines would be constructed of steel, polyethylene or fiberglass and would connect to the proposed pipeline servicing nearby BBC wells. The pipeline crosses entirely Ute Tribe surface.
- g. The new segment of gas pipeline would be surface laid within a 30 foot wide pipeline corridor adjacent to the proposed access road. See 12.d below for disturbance estimates.
- h. Construction of the ROW would temporarily utilize the 30 foot disturbed width for the road for a total disturbed width of 60 foot for the road and pipeline corridors. The use of the proposed well site and access roads would facilitate the staging of the pipeline construction.
- Pipeline construction methods and practices would be planned and conducted by BBC with the objective of enhancing reclamation and fostering the reestablishment of the native plant community.
- j. All permanent above-ground structures would be painted a flat, non-reflective Beetle Green color, to match the standard environmental colors. All facilities would be painted the designated color at the time of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded.
- k. Site security guidelines identified in 43 CFR 3162.7-5 and Onshore Oil and Gas Order No. 3 would be adhered to. Any modifications to proposed facilities would be reflected in the site security diagram submitted.

Bill Barrett Corporation Surface Use Plan #4X-5D-45 BTR Duchesne County, UT

1. The site would require periodic maintenance to ensure that drainages are kept open and free of debris, and that surfaces are properly treated to reduce erosion, fugitive dust, and impacts to adjacent areas.

### 5. <u>Location and Type of Water Supply:</u>

a. Water for the drilling and completion would be trucked from any of the following locations:

Water Right No. and Application or Change No.	Applicant	Allocation	Date	Point of Diversion	Source
43-180	Duchesne City	5 cfs	8/13/2004	Knight	Duchesne
	Water Service			Diversion Dam	River
	District				
43-1202, Change a13837	Myton City	5.49 cfr and	3/21/1986	Knight	Duchesne
		3967 acre feet		Diversion Dam	River
43-10444, Appln	Duchesne	2 cfs	1994	Ditch at	Cow Canyon
A57477	County Upper			Source	Spring
	Country Water				
43-10446, Appln F57432	Duchesne	1.58 cfs	1994	Ditch at	Cow Canyon
	County Upper			Source	Spring
	Country Water				
43-1273, Appln A17462	J.J.N.P.	7 cfs	1946	Strawberry	Strawberry
	Company			River	River
43-1273, Appln t36590	J.J.N.P.	4 cfs	6/03/2010	Strawberry	Strawberry
	Company			River	River
43-2505, Appln t37379	McKinnon	1.3 cfs	4/28/2011	Pumped from	Water Canyon
	Ranch			Sec, 17,	Lake
	Properties, LC			T4SR6W	
43-12415, Change	Peatross	1.89 cfs	09/2011	Dugout Pond	Strawberry
A17215a	Ranch, LLC				River

- b. No new water well is proposed with this application.
- c. Should additional water sources be pursued they would be properly permitted through the State of Utah Division of Water Rights.
- d. Water use would vary in accordance with the formations to be drilled but would be up to approximately 5.41 acre feet for drilling and completion operations.

### 6. Source of Construction Material:

a. The use of materials would conform to 43 CFR 3610.2-3.

Bill Barrett Corporation Surface Use Plan #4X-5D-45 BTR Duchesne County, UT

- b. No construction materials would be removed from the lease or EDA area.
- c. If any additional gravel is required, it would be obtained from a local supplier having a permitted source of materials within the general area.

### 7. <u>Methods of Handling Waste Disposal:</u>

- a. All wastes associated with this application would be contained and disposed of utilizing approved facilities.
- b. This location will be drilled with a closed loop system. There will be a cuttings storage area instead of a reserve pit.
- c. The cuttings storage area would be lined with 20 mil (minimum) thickness polyethylene nylon reinforced liner material. The liner(s) would overlay straw, dirt and/or bentonite if rock is encountered during excavation. The liner would overlap the pit walls and be covered with dirt and/or rocks to hold them in place. No trash, scrap pipe, or other materials that could puncture the liner would be discarded in the pit.
- d. To deter livestock from entering the cuttings storage area, the three sides exterior to the location would be fenced before drilling starts. Following the conclusion of drilling and completion activities, the fourth side would also be fenced.
- e. Drill cuttings would be stored in the cuttings storage area and either hauled to an approved disposal facility or will be buried on-site.
- f. Produced fluids from the well other than water would be decanted into steel test tank(s) until such time as construction of production facilities is completed. Any oil that may be accumulated would be transferred to a permanent production tank. Produced water may be used in further drilling and completion activities, evaporated in the pit, or would be hauled to one of the state-approved disposal facilities below:

#### **Disposal Facilities**

- 1. RNI Industries, Inc. Pleasant Valley Disposal Pits, Sec. 25, 26, 35 & 36, T4S-R3W
- 2. Pro Water LLC Blue Bench 13-1 Disposal Well (43-013-30971) NENE, Sec. 13, T3S-R5W
- 3. RN Industries, Inc. Bluebell Disposal Ponds, Sec. 2, 4 & 9, T2S-R2W
- 4. Water Disposal, Inc. Harmston 1-32-A1 Disposal Well (43-013-30224), UTR #00707, Sec. 32, T1S-R1W
- 5. Unified Water Pits Sec. 31, T2S-R4W
- 6. Iowa Tank Line Pits 8500 BLM Fence Road, Pleasant Valley
- g. Any salts and/or chemicals, which are an integral part of the drilling system, would be disposed of in the same manner as the drilling fluid.

Bill Barrett Corporation Surface Use Plan #4X-5D-45 BTR Duchesne County, UT

- h. Any spills of oil, condensate, produced or frac water, drilling fluids, or other potentially deleterious substances would be recovered and either returned to its origin or disposed of at an approved disposal site, most likely in Duchesne, Utah.
- i. Chemicals on the EPA's Consolidated List of Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) may be used or stored in quantities over reportable quantities. In the course of drilling, BBC could potentially store and use diesel fuel, sand (silica), hydrochloric acid, and CO<sub>2</sub> gas, all described as hazardous substances in 40 CFR Part 302, Section 302.4, in quantities exceeding 10,000 pounds. In addition, natural gas condensate and crude oil and methanol may be stored or used in reportable quantities. Small quantities of retail products (paint/spray paints, solvents {e.g., WD-40}, and lubrication oil) containing non-reportable volumes of hazardous substances may be stored and used on site at any time. No extremely hazardous substances, as defined in 40 CFR 355, would be used, produced, stored, transported or disposed of in association with the drilling, testing or completion of the wells.
- j. Portable toilets and trash containers would be located onsite during drilling and completion operations. A commercial supplier would install and maintain portable toilets and equipment and would be responsible for removing sanitary waste. Sanitary waste facilities (i.e. toilet holding tanks) would be regularly pumped and their contents disposed of at approved sewage disposal facilities in Duchesne, and/or Uintah Counties, in accordance with applicable rules and regulations regarding sewage treatment and disposal. Accumulated trash and nonflammable waste materials would be hauled to an approved landfill once a week or as often as necessary. All debris and waste materials not contained in the trash containers would be cleaned up, removed from the construction ROW, well pad, or worker housing location, and disposed of at an approved landfill. Trash would be cleaned up everyday.
- k. Sanitary waste equipment and trash bins would be removed from the Project Area upon completion of access road or pipeline construction; following drilling and completion operations at an individual well pad; when worker housing is no longer needed; or as required.
- 1. A flare pit may be constructed a minimum of 110 feet from the wellhead(s) and may be used during completion work. In the event a flare pit proves to be unworkable, a temporary flare stack or open top tank would be installed. BBC would flow back as much fluid and gas as possible into pressurized vessels, separating the fluids from the gas. In some instances, due to the completion fluids utilized within the Project Area, it is not feasible to direct the flow stream from the wellbore through pressurized vessels. In such instances BBC proposes to direct the flow to the open top tanks until flow through the pressurized vessels is feasible. At which point the fluid would either be returned to the pit or placed into a tank(s). The gas would be directed to the flare pit, flare stack (each with a constant source of ignition), or may be directed into the sales pipeline.

Bill Barrett Corporation Surface Use Plan #4X-5D-45 BTR Duchesne County, UT

m. Hydrocarbons would be removed from the cuttings storage area would as soon as practical. In the event immediate removal is not practical, the storage area would be flagged overhead or covered with wire or plastic mesh to protect migrating birds.

### 8. Ancillary Facilities:

- a. Garbage containers and portable toilets would be located on the well pad.
- b. On well pads where active drilling and completion is occurring, temporary housing would be provided on location for the well pad supervisor, geologist, tool pusher, and others that are required to be on location at all times. The well pad could include up to five single wide mobile homes or fifth wheel campers/trailers.
- c. A surface powerline corridor 275 feet in length is approved for installation by third-party installer within a 150 foot wide powerline corridor adjacent to the proposed access road. See 12.d below for disturbance estimates.

### 9. Well Site Layout:

- a. The well would be properly identified in accordance with 43 CFR 3162.6.
- b. The pad layout, cross section diagrams and rig layout are enclosed (see Figures 1 and 2).
- c. The pad and road designs are consistent with industry specifications.
- d. The pad has been staked at its maximum size of 400 feet x 255 feet with a cuttings storage area size of 60 feet x 110 feet. See section 12.d below for disturbance estimates.
- e. Within the approved well pad location, a crawler tractor would strip whatever topsoil is present and stockpile it along the edge of the well pad for use during reclamation. Vegetation would be distributed along the sides of the well pad.
- f. Fill from pit excavation would be stockpiled along the edge of the pit and the adjacent edge of the well pad.
- g. Use of erosion control measures, including proper grading to minimize slopes, diversion terraces and ditches, mulching, terracing, riprap, fiber matting, temporary sediment traps, and broad-based drainage dips or low water crossings would be employed by BBC as necessary and appropriate to minimize erosion and surface runoff during well pad construction and operation. Cut and fill slopes would be constructed such that stability would be maintained for the life of the activity.

Bill Barrett Corporation Surface Use Plan #4X-5D-45 BTR Duchesne County, UT

- h. All cut and fill slopes would be such that stability can be maintained for the life of the activity.
- i. Diversion ditches would be constructed, if necessary, around the well site to prevent surface waters from entering the well site area.
- j. Water application may be implemented if necessary to minimize the amount of fugitive dust.
- k. All surface disturbing activities would be supervised by a qualified, responsible company representative who is aware of the terms and conditions of the APD and specifications in the approved plans.

### 10. Plan for Restoration of the Surface:

- a. A site specific reclamation plan would be submitted, if requested, within 90 days of location construction to the surface managing agency.
- b. Site reclamation would be accomplished for portions of the well pad not required for the continued operation of the well on this pad within six months of completion, weather permitting.
- c. The operator would control noxious weeds along access road use authorizations and well site by spraying or mechanical removal, according to the Utah Noxious Weed Act and as set forth in the approved surface damage agreements.
- d. Rat and mouse holes would be filled and compacted from bottom to top immediately upon release of the drilling rig from location. Upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1. The cuttings storage area would be allowed to dry prior to the commencement of backfilling work. No attempts would be made to backfill the storage area until it is free of standing water. Once dry, the liner would be torn and perforated before backfilling.
- e. The cuttings storage area and that portion of the location not needed for production facilities/operations would be recontoured to the approximate natural contours. Areas not used for production purposes would be backfilled and blended into the surrounding terrain, reseeded and erosion control measures installed. Mulching, erosion control measures and fertilization may be required to achieve acceptable stabilization. Back slopes and fore slopes would be reduced as practical and scarified with the contour. The reserved topsoil would be evenly distributed over the slopes and scarified along the contour. Slopes would be seeded with the Ute Tribe specified seed mix.
- f. Topsoil salvaged from the drill site and stored for more than one year would be placed at the location indicated on the well site layout drawing and graded to a depth optimum to maintain topsoil viability, seeded with the Ute Tribe

Bill Barrett Corporation Surface Use Plan #4X-5D-45 BTR Duchesne County, UT

prescribed seed mixture and covered with mulch for protection from wind and water erosion and to discourage the invasion of weeds.

### 11. Surface and Mineral Ownership:

- a. Surface ownership Ute Indian Tribe 988 South 7500 East; Ft. Duchesne, Utah 84026; 435-725-4982.
- b. Mineral ownership Ute Indian Tribe 988 South 7500 East; Ft. Duchesne, Utah 84026; 435-725-4982.

### 12. Other Information:

- a. Montgomery Archeological Consultants has conducted a Class III archeological survey. A copy of the report has been submitted under separate cover to the appropriate agencies by Montgomery as MOAC Report No. 10-210- dated October 25, 2010.
- b. BBC would require that their personnel, contractors, and subcontractors to comply with Federal regulations intended to protect archeological and cultural resources.
- c. Project personnel and contractors would be educated on and subject to the following requirements:
  - No dogs or firearms within the Project Area.
  - No littering within the Project Area.
  - Smoking within the Project Area would only be allowed in off-operator active locations or in specifically designated smoking areas. All cigarette butts would be placed in appropriate containers and not thrown on the ground or out windows of vehicles; personnel and contractors would abide by all fire restriction orders.
  - Campfires or uncontained fires of any kind would be prohibited.
  - Portable generators used in the Project Area would have spark arrestors.

### d. Disturbance estimates:

No new disturbance is needed.

Bill Barrett Corporation Surface Use Plan #4X-5D-45 BTR Duchesne County, UT

### **OPERATOR CERTIFICATION**

#### Certification:

I hereby certify that I, or someone under my direction supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein would be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application and that bond coverage is provided under Bill Barrett Corporations federal nationwide bond. These statements are subject to the provisions of 18 U.S.C. 1001 for the filings of false statements.

Executed this

Name:

19<sup>th</sup> day of March, 2013

Venessa Langmacher

Position Title:

Senior Permit Analyst

Address: 1099 18<sup>th</sup> Street, Suite 2300, Denver, CO 80202

Telephone: 303-312-8172

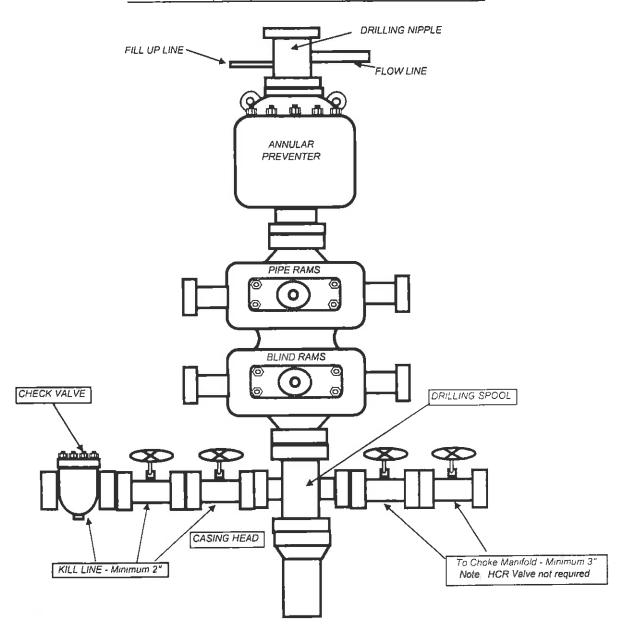
E-mail: vlangmacher@billbarrettcorp.com
Field Representative Kary Eldredge / Bill Barrett Corporation
Address: 1820 W. Highway 40, Roosevelt, UT 84066
Telephone: 435-725-3515 (office); 435-724-6789 (mobile)

E-mail: keldredge@billbarrettcorp.com

Venessa Langmacher, Senior Permit Analyst

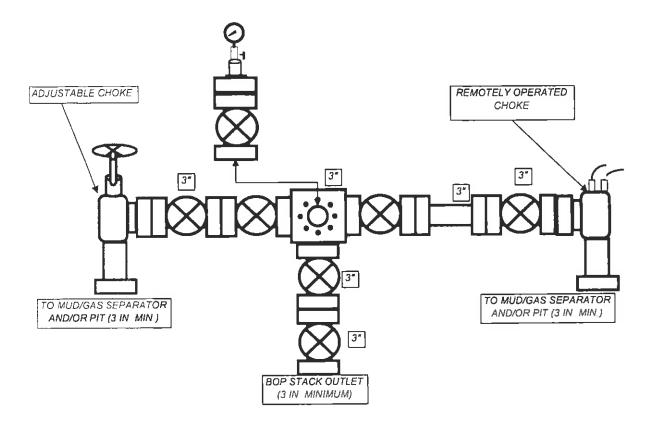
# **BILL BARRETT CORPORATION**

# TYPICAL 5,000 p.s.i. BLOWOUT PREVENTER



# **BILL BARRETT CORPORATION**

TYPICAL 5,000 p.s.i. CHOKE MANIFOLD





March 19, 2013

Ms. Diana Mason – Petroleum Technician State of Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210 P. O. Box 145801 Salt Lake City, Utah 84114-5801

Re: Directional Drilling R649-3-11

Blacktail Ridge Area #4X-5D-45 BTR Well

Surface: 750' FNL & 1,262' FWL, NWNW, Lot 4 of 5-T4S-R5W, USM Bottom Hole: 810' FNL & 810' FWL, NWNW, Lot 4 of 5-T4S-R5W, USM

Duchesne County, Utah

Dear Ms. Mason,

Pursuant to the filing of Bill Barrett Corporation's ("BBC") Application for Permit to Drill the above referenced well, we hereby submit this letter in accordance with Oil & Gas Conservation Rules R649-2, R649-3, R649-10 and R649-11, pertaining to the Location and Siting of Wells.

- The proposed location is within our Blacktail Ridge Area.
- BBC is permitting this well as a directional well in order to minimize surface disturbance. By locating the well at the surface location and directionally drilling from this location, BBC will be able to utilize the existing road and pipelines in the area.
- The well will be drilled under an Exploration and Development Agreement between the Ute Indian Tribe and Ute Distribution Corporation. Ute Energy, LLC owns a right to participate in this well.
- BBC certifies that it is the working interest owner of all lands within 460 feet of the proposed well location, and together with Ute Energy, LLC, we own 100% of the working interest in these lands.

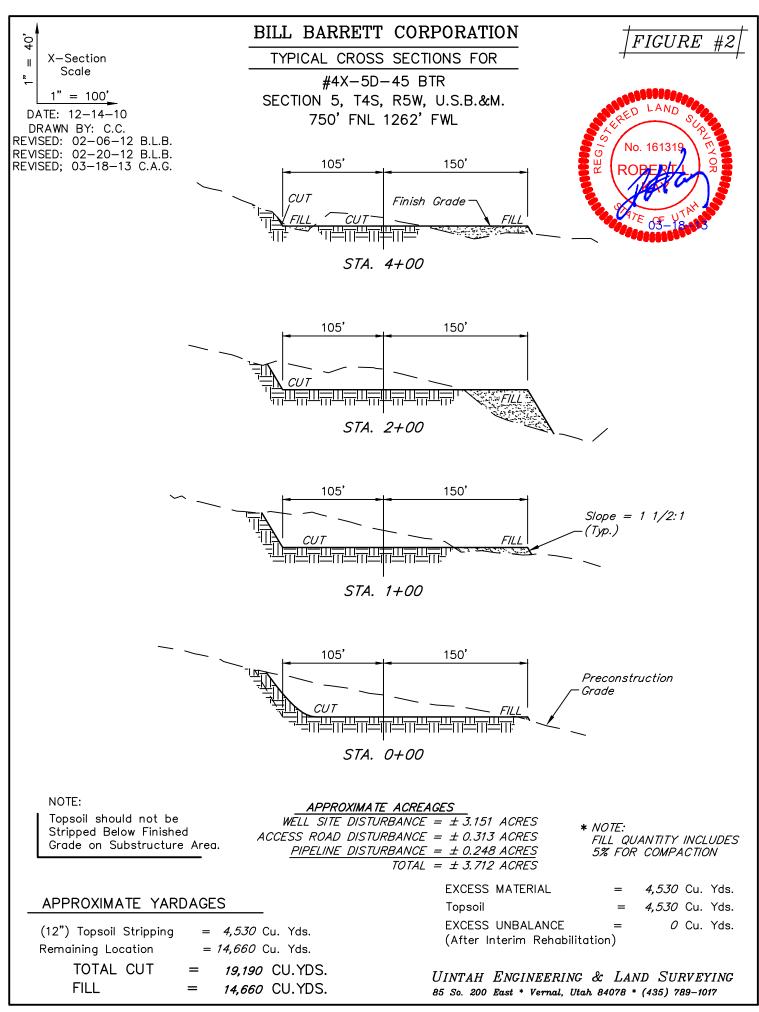
Based on the information provided, BBC requests that the permit be granted pursuant to R649-3-11. Should you have any questions or need further information, please contact me at 303-312-8544.

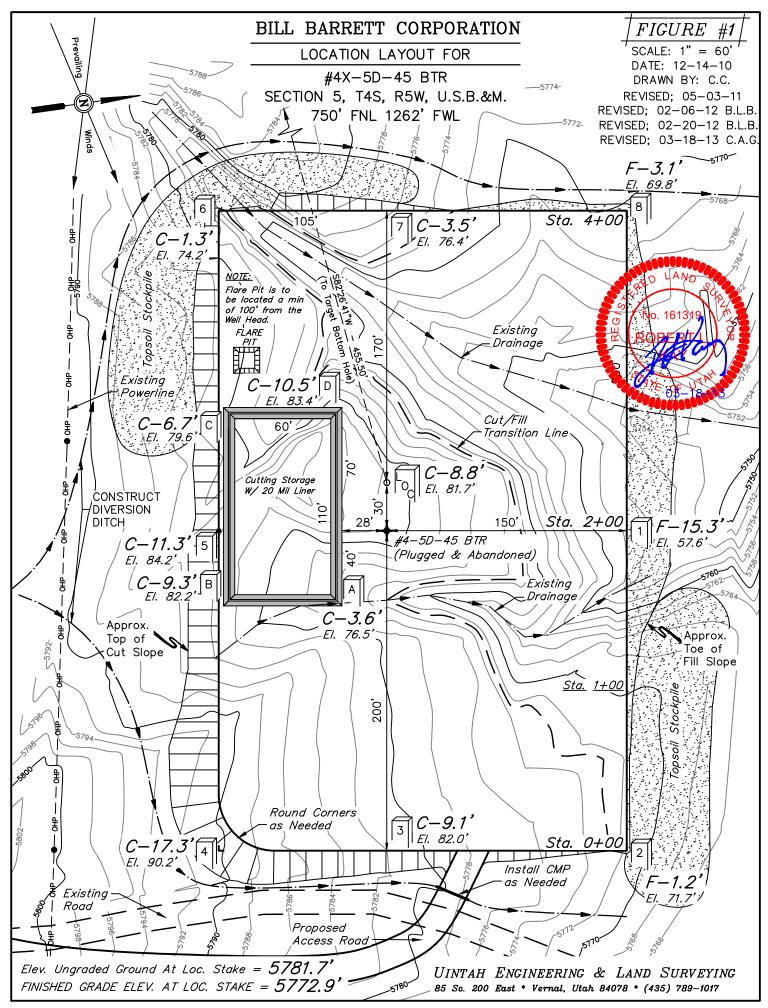
Sincerely,

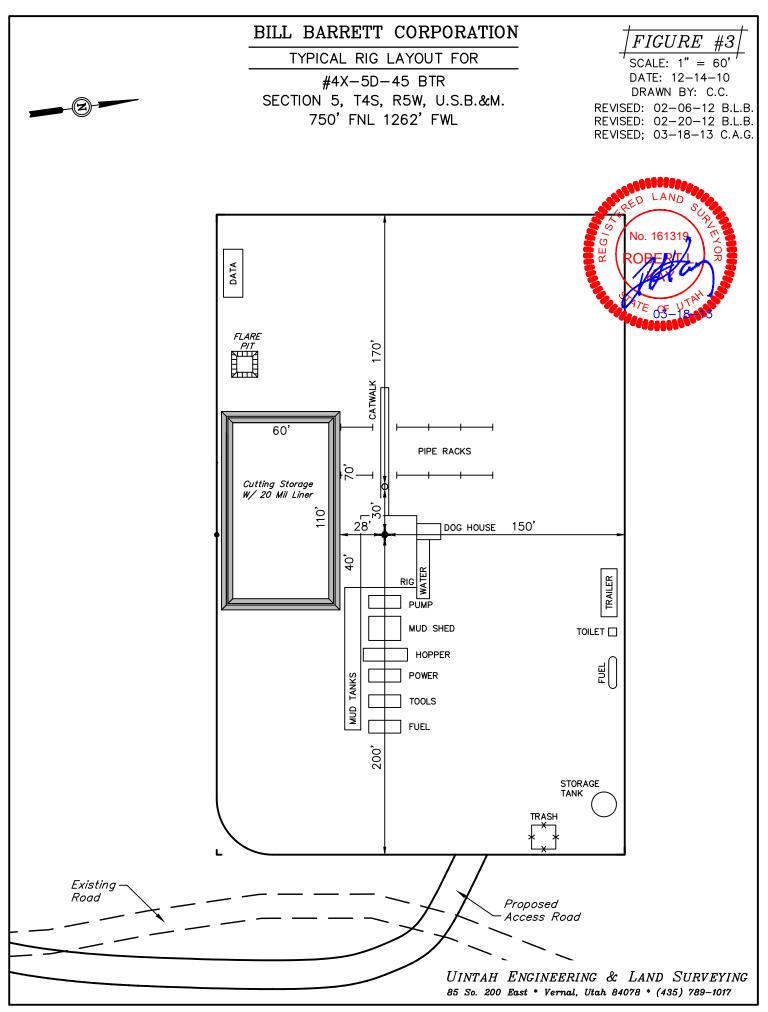
David Watts Landman

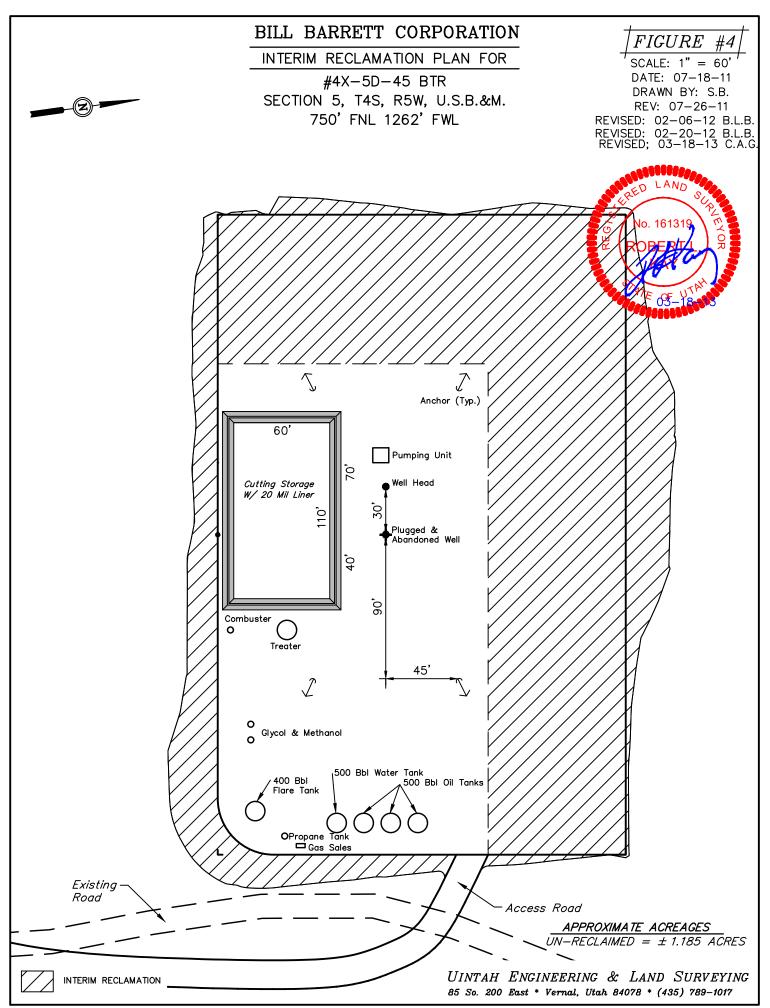
1099 18<sup>TH</sup> STREET
SUITE 2300
DENVER, CO 80202
P 303.293.9100
F 303.291.0420

RECEIVED: March 19, 2013









Form 3160-4 (August 2007)	DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT															FORM A OMB No Expires: J	. 100	04-0137		
	WELL (	СОМРІ	LETION (	R R	ECO	MPLE	ETIO	N RE	EPOR	T AN	ID L	OG				ase Ser 420H62				
1a. Type of	_	Oil Well	l 🔲 Gas	Well	□ I	Dry	Ot	her							6. If	Indian,	Allottee	or	Гribe Nam	e
b. Type o	f Completion		New Well er	_	ork Ov	/er [	☐ Dec	epen	☐ P1	lug Bac	k	☐ Dif	f. Res	vr.	7. Unit or CA Agreement Name and No.				ıd No.	
2. Name of BILL B.	f Operator ARRETT CO	ORPORA	ATION E	-Mail:	vlang	Contac			SA LAN		HER					ase Nar	ne and 'BTR	Well	No.	
3. Address	1099 18TI DENVER,			300					Phone: 303-3			area co	ode)		9. Al	PI Well	No.		43-013-5	1242
4. Location	n of Well (Re			nd in ac	ccorda	nce with	ı Fede				<u> </u>					ield and			xploratory	
At surfa	ace NWNV	V Lot 4 7	55FNL 129	2FWL											11. S	Sec., T.,	R., M.,	or B	lock and S	Survey
At top p	orod interval i	reported b	pelow NW	NW Lo	ot 4 75	55FNL <sup>2</sup>	1292F	WL									Sec 5 7 or Parish		R5W Me	
	depth NW	NW Lot							16.5						D	UCHE	SNE		UT	
14. Date S <sub>1</sub> 01/31/2	pudded 2013			ate T.E /13/20		ched			16. Da	ate Con & A		d Ready 1	to Prod	1.	17. E	Elevation	ns (DF, 5782 G	KB, SL	RT, GL)*	
18. Total D	Depth:	MD TVD	2087 2087		19.	Plug Ba	ack T.	D.:	MD TVD	)			2	0. Dep	th Bri	dge Plug	g Set:		ID VD	
21. Type E	Electric & Oth	er Mecha	ınical Logs R	un (Su	bmit c	opy of e	each)						as DS	T run?	i? rvey?	No No No No	_ <u>□</u> Y	es (	Submit an Submit an Submit an	alysis)
23. Casing a	nd Liner Reco	ord (Rep	ort all strings	set in	well)															
Hole Size	Size/G	rade	Wt. (#/ft.)		op ID)	Bott (Ml			Cement Depth			Sks. & Ceme	- 1	Slurry (BB	I Cement Lon*				Amount	Pulled
26.000	16.000	0 COND	65.0		0		80		3	30			_					0		
	1												+					+		
	1									_			$\perp$					+		
24. Tubing	Record		<u> </u>	<u> </u>																
Size	Depth Set (M	(ID) F	acker Depth	(MD)	Si	ze	Depth	n Set (N	MD)	Packe	r Dep	th (MD	))	Size	De	pth Set	(MD)	P	acker Dep	th (MD)
25. Produci	ng Intervals						26.	Perfora	ation Re	ecord										
	ormation		Тор		Во	ottom			Perforate		val			Size	N	lo. Hole	es		Perf. Statu	1S
A)																				
B)		_													_		_			
C) D)		-+													+		+			
	racture, Treat	ment, Ce	ment Squeez	e, Etc.																
	Depth Interva	al								Amoui	nt and	Туре	of Mat	erial						
20 D 1																				
28. Product Date First	ion - Interval	Hours	Test	Oil	Т	Gas	- Iw	Vater	Oil	Gravity		Ga	as		Producti	on Method	1			
Produced	Date	Tested	Production	BBL		MCF		BL		rr. API			avity		Troducti		-			
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL		Gas MCF		/ater BL	Ga: Rai	s:Oil tio		W	ell Statu	s						
28a. Produc	tion - Interva	ıl B																		
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL		Gas MCF		/ater BL		Gravity rr. API		Ga Ga	as avity		Producti	on Method	i			
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL		Gas MCF		/ater BL	Ga: Rai	s:Oil tio		W	ell Statu	s						

(See Instructions and spaces for additional data on reverse side)
ELECTRONIC SUBMISSION #201974 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

API V	Well Nu	mber	: 43013	3521040	0000							
28h Pro	duction - Inter	val C										
Date First Produced	Test Date	Hours Tested	Test Production		Gas MCF					Production Method		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate		Gas MCF							
28c. Pro	duction - Interv	val D										
Date First Produced	Test Date	Hours Tested	Test Production		Gas MCF	Water Oil Gravity Gas Production  Corr. API Gravity						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate		Gas MCF	Water BBL	Gas:Oil Ratio					
29. Disp	osition of Gas(	Sold, use	d for fuel, vent	ed, etc.)								
30. Sumi	mary of Porous	zones of	Include Aquifer porosity and co al tested, cushio	ontents thereo	of: Cored i	intervals and, flowing an	d all drill-stem nd shut-in press	ures	31. For	mation (Log) Markers		
	Formation		Top Bottom Descriptions, Contents, etc.					Name		Top Meas. Depth		
			plugging proce							41		
33. Circl 1. E 5. S 34. I her	ted a flash fir ducedure is list le enclosed atta dectrical/Mech aundry Notice f	e on the ted on the te	erig floor. The he end of well is going and cement going and attac	eq'd.) verification whed informat	ion is con	Geolog     Geolog     Geolog     Geolog     Geolog     Geolog     Tore A	correct as determined by the BLM	mined from	formation Sy e Vernal	e records (see attached stem.		nal Survey
	ne (please print)		SSA LANGMA	1	1a Ja	ugmael	0.00	e <u>SENIO</u> e <u>03/19/2</u>	2013	NIVAL I O I		

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fradulent statements or representations as to any matter within its jurisdiction.

# **Bill Barrett Corp**

Duchesne County, UT (NAD 1927) Sec. 5-T4S-R5W 4-5D-45 BTR

Plan A

**Design: Sperry Final Survey** 

# **Sperry Drilling Services**Standard Report

19 March, 2013



Well Coordinates: 669,615.48 N, 2,285,536.19 E (40° 10' 02.28" N, 110° 28' 41.67" W)

Ground Level: 5,773.00 ft

Local Coordinate Origin:

Centered on Well 4-5D-45 BTR

Viewing Datum:

RKB 22' @ 5795.00ft (Nabors M22)

TVDs to System:

North Reference:

Unit System:

API - US Survey Feet - Custom

Geodetic Scale Factor Applied Version: 2003.16 Build: 43I

**HALLIBURTON** 

### **HALLIBURTON**

### **Design Report for 4-5D-45 BTR - Sperry Final Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00
154.00	0.40	198.800	154.00	-0.51	-0.17	0.23	0.26
	/ MWD Survey	_					
215.00	0.51	210.160	215.00	-0.95	-0.38	0.48	0.23
276.00	0.53	223.340	275.99	-1.39	-0.71	0.86	0.20
337.00	0.38	210.900	336.99	-1.76	-1.01	1.20	0.29
399.00	0.30	244.790	398.99	-2.01	-1.26	1.48	0.34
460.00	0.30	267.600	459.99	-2.08	-1.56	1.79	0.19
521.00	0.39	327.310	520.99	-1.92	-1.83	2.04	0.58
589.00	0.46	318.370	588.99	-1.52	-2.14	2.30	0.14
650.00	0.44	319.350	649.99	-1.16	-2.46	2.57	0.04
711.00	0.26	302.240	710.98	-0.91	-2.73	2.81	0.34
772.00	0.21	291.160	771.98	-0.79	-2.95	3.02	0.11
834.00	0.32	274.790	833.98	-0.74	-3.22	3.29	0.21
895.00	0.42	259.060	894.98	-0.76	-3.61	3.68	0.23
956.00	0.76	243.550	955.98	-0.99	-4.20	4.28	0.61
1,017.00	0.85	230.900	1,016.97	-1.45	-4.91	5.04	0.33
1,078.00	0.28	236.370	1,077.97	-1.82	-5.38	5.56	0.94
1,139.00	0.29	73.180	1,138.97	-1.86	-5.36	5.54	0.92
1,201.00	0.74	34.280	1,200.97	-1.48	-4.99	5.12	0.88
1,261.00	0.89	19.210	1,260.96	-0.72	-4.61	4.67	0.43
1,323.00	0.68	12.360	1,322.96	0.09	-4.38	4.34	0.37
1,384.00	0.31	357.440	1,383.95	0.61	-4.31	4.21	0.64
1,445.00	0.29	284.830	1,444.95	0.82	-4.46	4.34	0.58
1,508.00	0.60	240.480	1,507.95	0.69	-4.90	4.79	0.70
1,572.00	0.78	221.060	1,571.95	0.20	-5.48	5.42	0.46
1,635.00	0.52	238.730	1,634.94	-0.27	-6.01	6.00	0.52
1,698.00	0.52	295.550	1,697.94	-0.30	-6.51	6.50	0.79
1,762.00	0.72	312.860	1,761.94	0.10	-7.07	7.01	0.42
1,825.00	0.81	242.190	1,824.93	0.16	-7.75	7.68	1.41
1,888.00	1.31	206.950	1,887.92	-0.69	-8.47	8.49	1.27
1,951.00	0.99	193.220	1,950.91	-1.86	-8.92	9.08	0.67
2,015.00	0.77	176.380	2,014.90	-2.82	-9.02	9.29	0.53
Last Sperry	MWD Survey	@ 2015.00' MI	D				
2,087.00	0.77	176.380	2,086.89	-3.79	-8.96	9.34	0.00

### **Design Annotations**

Measured	Vertical	Local Coor	dinates			
Depth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment		
154.00	154.00	-0.51	-0.17	First Sperry MWD Survey @ 154.00' MD		
2,015.00	2,014.90	-2.82	-9.02	Last Sperry MWD Survey @ 2015.00' MD		
2,087.00	2,086.89	-3.79	-8.96	Straight Line Projection to TD @ 2087.00' MD		

### Duchesne County, UT (NAD 1927)

## Design Report for 4-5D-45 BTR - Sperry Final Survey

<del></del>	<u>Vertical</u>	Section	<u>Information</u>
-------------	-----------------	---------	--------------------

Angle Origin Origin Start Type **Azimuth** Type Target +N/ S +E/-W TVD (°) (ft) (ft) (ft) 4-5D-45 BTR BHL Plat 263.385 0.00 Target Slot 0.00 0.00

### Survey tool program

**HALLIBURTON** 

 From (ft)
 To (ft)
 Survey/Plan
 Survey Tool

 154.00
 2,087.00
 Sperry MWD Surveys
 MWD

### **Targets**

Target Name Dip - hit/miss target Angle - Shape (°)	Dip Dir. TVD (°) (ft)	+N/-S +E/ (ft) (ft		Easting (ft)	Latitude	Longitude
4-5D-45 BTR_BHL F 0.00	0.00 8,795.00	-55.72 -4	80.44 669,554.28	2,285,056.46	40° 10' 1.729 N	110° 28' 47.860 W
<ul><li>actual wellpath misses ta</li><li>Point</li></ul>	arget center by 6724	1.85ft at 2087.00ft MD	) (2086.89 TVD, -3.7	'9 N, -8.96 E)		
4-5D-45 BTR_ZONE 0.00	0.00 6,350.00	-55.72 -4	80.44 669,554.28	2,285,056.46	40° 10' 1.729 N	110° 28' 47.860 W
<ul> <li>actual wellpath misses to</li> <li>Rectangle (sides W200.0</li> </ul>	arget center by 4289 00 H200.00 D2,445	9.41ft at 2087.00ft MD 00)	) (2086.89 TVD, -3.7	9 N, -8.96 E)		
4-5D-45 BTR_SHL 0.00	0.00 0.00	0.00	0.00 669,615.48	2,285,536.19	40° 10' 2.280 N	110° 28' 41.671 W
<ul><li>actual wellpath hits targe</li><li>Point</li></ul>	et center					
4-5D-45 BTR_Sectic 0.00	0.00 0.00	0.00	0.00 669,615.48	2,285,536.19	40° 10' 2.280 N	110° 28' 41.671 W
- actual wellpath hits targe - Polygon Point 1 Point 2 Point 3 Point 4 Point 5		1,292.00 755.00 3,986.00 755.00 3,986.00 -1,857.00 1,292.00 -1,912.00 1,292.00 755.00	670,415.90 2 667,804.29 2 667,689.01 2	2,284,235.76 2,289,512.97 2,289,542.81 2,284,266.22 2,284,235.76		
4-5D-45 BTR_Setba 0.00	0.00 0.00	0.00	0.00 669,615.48	2,285,536.19	40° 10' 2.280 N	110° 28' 41.671 W
- actual wellpath hits targe - Polygon Point 1 Point 2 Point 3 Point 4 Point 5	et center	-632.00 95.00 3,326.00 95.00 3,326.00 -1,857.00 -632.00 -1,912.00 -632.00 95.00	669,748.46 2 667,796.75 2 667,696.55 2	2,284,903.20 2,288,860.61 2,288,882.90 2,284,926.13 2,284,903.20		

### **HALLIBURTON**

### North Reference Sheet for Sec. 5-T4S-R5W - 4-5D-45 BTR - Plan A

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.

Vertical Depths are relative to RKB 22' @ 5795.00ft (Nabors M22). Northing and Easting are relative to 4-5D-45 BTR

Coordinate System is US State Plane 1927 (Exact solution), Utah Central 4302 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866 Projection method is Lambert Conformal Conic (2 parallel)

Central Meridian is 111° 30' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:40° 39' 0.000 N°

False Easting: 2,000,000.00ft, False Northing: 0.00ft, Scale Reduction: 0.99991560

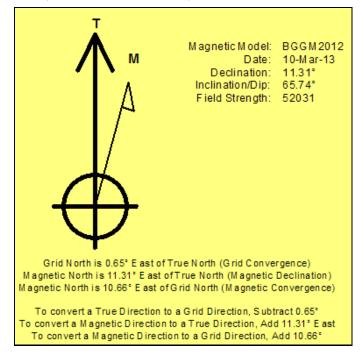
Grid Coordinates of Well: 669,615.48 ft N, 2,285,536.19 ft E

Geographical Coordinates of Well: 40° 10' 02.28" N, 110° 28' 41.67" W

Grid Convergence at Surface is: 0.65°

Based upon Minimum Curvature type calculations, at a Measured Depth of 2,087.00ft the Bottom Hole Displacement is 9.73ft in the Direction of 247.07° (True).

Magnetic Convergence at surface is: -10.66° (10 March 2013, , BGGM2012)

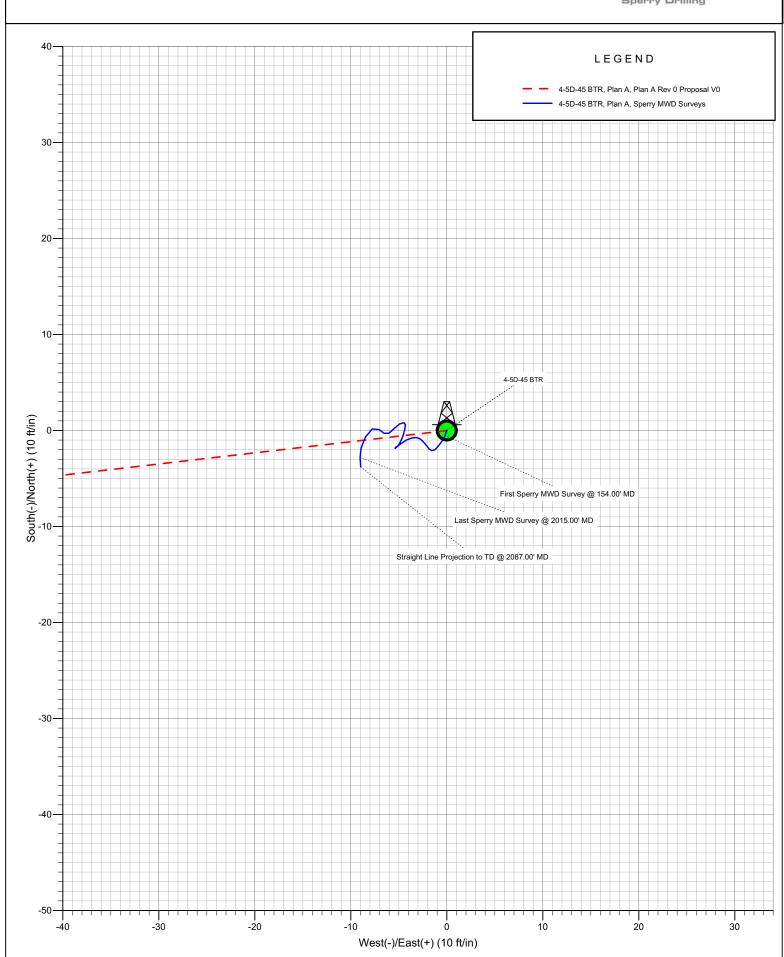


Project: Duchesne County, UT (NAD 1927) Site: Sec. 5-T4S-R5W

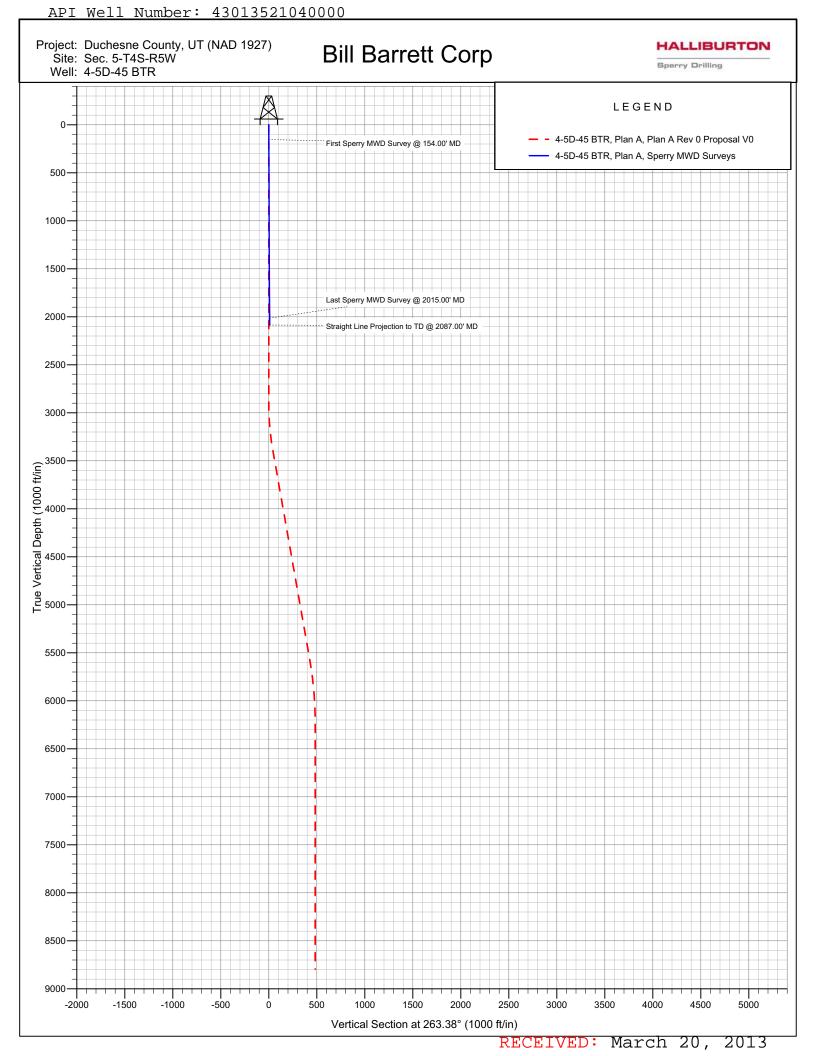
Well: 4-5D-45 BTR

# Bill Barrett Corp





RECEIVED: March 20, 2013





_												
1-5D-	45 BTR		2013 22 State/Province	2:00 - 3/8/2013	6 06:00 Field Nam	Δ	Well Status	Total Depth (ftKB)	Primary Job Type			
301351	2420000		JT	County Duchesne	<b>I</b>	e ail Ridge	DRILLING	Тогаг Бергіп (ПКВ)	0.0 Drilling & Completion			
me Lo	<b>g</b> Dur (hr)	End Time	Code	Category		1		Com				
2:00	8.00	06:00	1	RIGUP & TEARDOWN		Rig dowr	Prepare for trucks.					
-5D-	45 BTR	3/8/2	2013 0	6:00 - 3/9/2013	06:00							
PI/UWI	2420000		State/Province	County Duchesne	Field Nam	e ail Ridge	Well Status DRILLING	Total Depth (ftKB)	Primary Job Type 0.0 Drilling & Completion			
ime Lo		,	J I	Ducheshe	DIACK I	all Kluge	DRILLING		0.0 Drilling & Completion			
start Time	Dur (hr)	End Time	Code	Category				Com				
6:00		06:00	1	RIGUP & TEARDOWN		[МІКО, М	ud tanks and entire b	ackyard set in.				
1-5D-	45 BTR		2013 U	6:00 - 3/10/201	3 06:00 Field Nam	ρ.	Well Status	Total Depth (ftKB)	Primary Job Type			
	2420000		JT	Duchesne		ail Ridge	DRILLING	Total Deptil (tito)	0.0 Drilling & Completion			
ime Lo		Fad Time	Cada	Cotonomi				Com				
tart Time 6:00	Dur (hr) 24.00	End Time 06:00	Code 1	Category RIGUP & TEARDOWN		Move an	d assemble Substruc	Com ture and derrick. Derrick r	eady to raise.			
1-5D-	45 BTR	3/10	/2013	06:00 - 3/11/20		<u> </u>			•			
PI/UWI		S	State/Province		Field Nam	е	Well Status	Total Depth (ftKB)	Primary Job Type			
	2420000	l	JT	Duchesne	Black T	ail Ridge	DRILLING		0.0 Drilling & Completion			
ime Lo	<b>g</b> Dur (hr)	End Time	Code	Category				Com				
6:00	20.00	02:00	1	RIGUP & TEARDOWN		Raise de	rrick, Continue rig up					
2:00		04:30	21	OPEN			onductor, flowline and	l turnbuckles.				
4:30		06:00	21	OPEN		Rack & s	trap BHA					
	45 BTR			06:00 - 3/12/20								
PI/UWI 301351	2420000		State/Province	County Duchesne	Field Nam Black T	e ail Ridge	Well Status DRILLING	Total Depth (ftKB)	Primary Job Type 0.0 Drilling & Completion			
ime Lo				240000	2.00.1		J		ore Diming a completion			
tart Time 6:00	Dur (hr) 7.00	End Time 13:00	Code 20	Category DIRECTIONAL WORK		D/LI dir to	ools & orient drill to 17	Com				
3:00		13:00	7	LUBRICATE RIG		Rig servi		79				
3:30		18:30	2	DRILL ACTUAL			Drlg 179-317'.					
8:30	0.50	19:00	7	LUBRICATE RIG		Rig service						
9:00	11.00	06:00	2	DRILL ACTUAL		Drlg 317-	-997'. Survey @ 895'	.42 inc 259 az. MW 8.6+#	/gal 39 vis			
1-5D-	45 BTR	3/12	/2013	06:00 - 3/13/20	13 06:0	0						
PI/UWI	2420000		State/Province	1 '	Field Nam		Well Status	Total Depth (ftKB)	Primary Job Type 0.0 Drilling & Completion			
ime Lo		·	JT	Duchesne	віаск і	ail Ridge	DRILLING		0.0 Drilling & Completion			
Start Time	Dur (hr)	End Time		Category				Com				
6:00	20.50		2	DRILL ACTUAL		Drill 997'		0	hubble to and 0.05.00			
2:30	3.50	06:00	21	OPEN		flash fire		ted @ 05:15, dropped top	as bubble to surface @ 05:00, drive to floor. @ 06:00			
1-5D-	45 BTR	3/13	/2013	06:00 - 3/14/20	13 06:0	0						
PI/UWI 1201351	2420000		State/Province	County Duchesne	Field Nam	e ail Ridge	Well Status DRILLING	Total Depth (ftKB)	Primary Job Type 0.0 Drilling & Completion			
ime Lo			<i>-</i> 1	Ductiestie	Diack I	an Maye	DIVICENTO		o.oppning & Completion			
Start Time	Dur (hr)	End Time		Category		0: 1:	II O 442 : 1	Com				
6:00	24.00	06:00	5	COND MUD & CIRC				9.5 ppg, 46 vis until 23:00 nning for remedial action.	), raised mw to 9.8 ppg. BBC a			
	45 BTR	3/14	/2013	06:00 - 3/15/20	13 06:0	0			_			
4-5D-		15	State/Province	County Duchesne	Field Nam	e ail Ridge	Well Status DRILLING	Total Depth (ftKB)	Primary Job Type 0.0 Drilling & Completion			
PI/UWI	2420000		IT	Duonicone	Didok 1	all rauge	DIVILLING		0.0 Drining & Completion			
PI/UWI 1301351	2420000 g		JT	· ·								
API/UWI 4301351 Fime Lo Start Time	<b>g</b> Dur (hr)	End Time	Code	Category		0' 1 1	II O 442 : 1	Com				
API/UWI	g	End Time		Category COND MUD & CIRC			well @ 110 strokes,	1200 psi. Fire marshall in	spected rig. Rigged up 500 ton			



API/UWI 4301351	2420000		state/Provinc JT	е	County Duchesne	Field Nam Black T	e ail Ridge	Well Status DRILLING	[7	Γotal Depth (ftKB)	0.0	Primary Job Type Drilling & Completion		
me Lo	g											g		
art Time	Dur (hr)	End Time	Code		Category					Com				
6:00	13.00	19:00	5	COND	D MUD & CIRC		drive. Flo	well @ 110 strokes, 1 w check, pull top drive stablish PIR (1 bpm-4	e up and s	set slips. Cut drill	ing lir	ne and tie off, remove		
9:00	2.50	21:30	21	OPEN			R/U DCT	wireline, perforate HV	WDP @ 1	666'.				
1:30	6.00	03:30	5	COND	MUD & CIRC		C&C hole	e/wait on cement.						
-5D-	45 BTR	3/16/	/2013	06:00	) - 3/17/20 <sup>-</sup>	13 06:0	0							
PI/UWI	0.400000	_	tate/Provinc	е	County	Field Nam		Well Status	٦	Total Depth (ftKB)		Primary Job Type		
	2420000	ι	JT		Duchesne	віаск і	ail Ridge	DRILLING			0.0	Drilling & Completion		
ime Lo		I = . =.	T		2.1									
tart Time 6:00	( )	End Time 12:00	Code 5	COND	Category OND MUD & CIRC			Com Circulate well @ 70 strokes, 725 psi/wait on cement.						
2:00		14:00	17	PLUG			HSM. R/U HES. Pressure test to 3000 psi, pump 30 bbls tuned lite spacer @ 10.5 ppg							
							4.15 yld, 27.82 gps H2O. Mix and pump 610 sx(247 bbls) tuned light cement @ 11 ppg 2.28 yld, 10.48 gps H2O @ 4 bpm. Pump 3.5 bbls to clear lines. Full returns, max pressure 400 psi. Returned 25 bbls cmt to surface. Cement fell 6" in 45 minutes. Drained and flushed conductor. Cement job witnessed and okayed by Glade Rich of Vernal BLM.							
4:00	16.00	06:00	13	WAIT	ON CEMENT		Wait on o	cement. Checked cmt	@ 23:00,	too soft to cut of	f.			
I-5D-	45 BTR	3/17/	2013	06:00	) - 3/18/20 <sup>-</sup>	13 06:0	0							
	2420000		state/Provinc JT	е	County Duchesne	Field Nam Black T	<sup>e</sup> ail Ridge	Well Status DRILLING	٦	Total Depth (ftKB)	0.0	Primary Job Type Drilling & Completion		
ime Lo		I = . =.	I		2.1									
tart Time 6:00		End Time 10:00	Code 13	MAIT (	Category ON CEMENT		WOC. Repair rig.							
0:00		16:00	21	OPEN			1 0							
0:00	6.00	16:00	21	OPEN	I		Used gas sniffer on DP and conductor, no indications of gas. Cut on conductor, Gas indications up through cement. Cut off conductor and DP, weld 1/2" plate w/2" 3000# ball valve on top of conductor. Well contained, BLM and State contacted.							
6:00	14.00	06:00	8	REPAI	R RIG		Removed and replaced top drive, blocks, ST-80 iron roughneck. Drawworks readied for removal.							

www.peloton.com Page 2/2 Report Printed: 3/19/2013

State of Utah Mail - 4-5D-45 BTR P&A well



### Dustin Doucet< dustindoucet@utah.gov>

### 4-5D-45 BTR P&A well

1 message

Wed, Mar 20, 2013 at 8:53 AM

To: "dustindoucet@utah.gov" <dustindoucet@utah.gov>

Cc: Venessa Langmacher <vlangmacher@billbarrettcorp.com>, Troy Schindler

<tschindler@billbarrettcorp.com>, Cory Thomas <cthomas@billbarrettcorp.com>, Naborsm22

<naborsm22@bbccontractors.com>

Dustin,

As per our conversation yesterday concerning the P&A'd 4-5D-45 BTR, we plan to do the following:

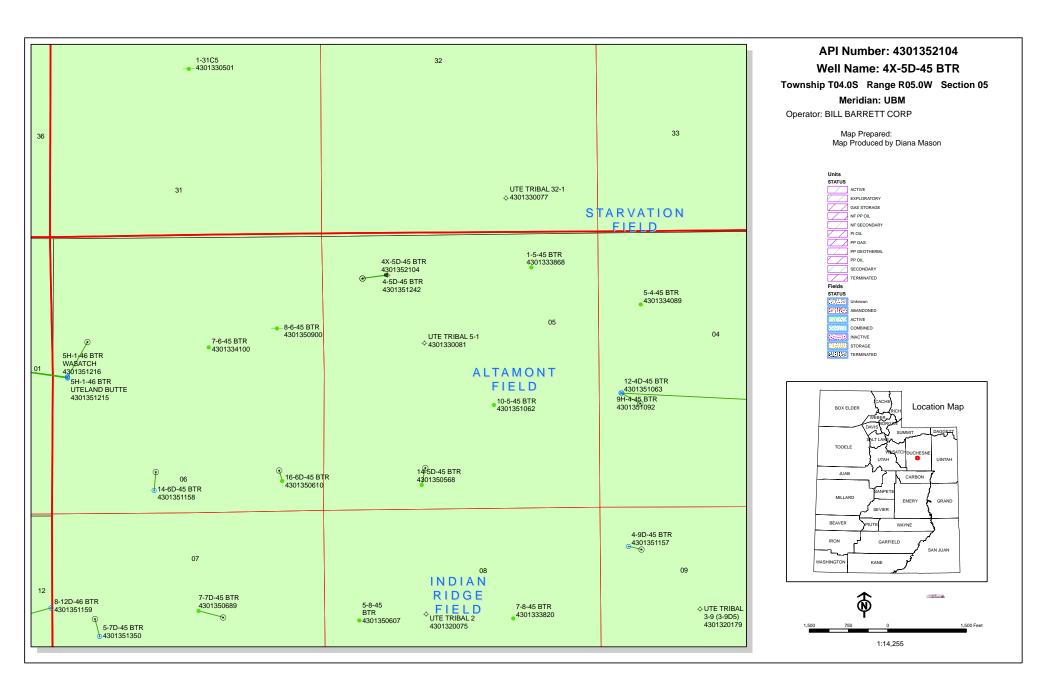
- Continue to monitor and vent the well via a vent line away from the rig. The well gives a very slight blow and builds to 55 psi max in 35 min.
- Tourly walk the area around the well, inspecting for any gas coming up to the surface.
- We will set 80' of 16" conductor for the replacement well 4X-5D-45 BTR using 9.5 ppg mud and pressure cement to surface. This well will be located 30' west.
- Skid the rig to the 4X-5D-45 BTR.
- Install a diverter on the 16" conductor. A gas detector and mudlogger will be used to monitor the new well.
- Drill the surface hole with a minimum of 9.5 ppg mud, increasing as necessary based on well conditions and gas levels while drilling.
- Surface will be set at 2800' and cemented to surface.
- Continue to vent the P&A'd well, and inspect the area for gas coming to the surface
- The 4-5D-45 BTR will be monitored/vented as necessary in the future and any changes noted.

Thanks

**Brent Murphy** 

Sr. Drilling Engineer

Bill Barrett Corporation



# WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 3/19/2013	API NO. ASSIGNED: 43013521040000

WELL NAME: 4X-5D-45 BTR

**OPERATOR:** BILL BARRETT CORP (N2165) **PHONE NUMBER:** 303 312-8172

**CONTACT:** Venessa Langmacher

PROPOSED LOCATION: NWNW 05 040S 050W Permit Tech Review:

SURFACE: 0750 FNL 1262 FWL Engineering Review:

BOTTOM: 0810 FNL 0810 FWL Geology Review:

COUNTY: DUCHESNE

LATITUDE: 40.16711 LONGITUDE: -110.47921 UTM SURF EASTINGS: 544346.00 NORTHINGS: 4446435.00

FIELD NAME: ALTAMONT LEASE TYPE: 2 - Indian

LEASE NUMBER: 1420H626261 PROPOSED PRODUCING FORMATION(S): GREEN RIVER(LWR)-WASATCH

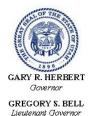
SURFACE OWNER: 2 - Indian COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:	LOCATION AND SITING:
<b>▶</b> PLAT	R649-2-3.
<b>☑</b> Bond: INDIAN - LPM8874725	Unit:
Potash	R649-3-2. General
Oil Shale 190-5	
Oil Shale 190-3	R649-3-3. Exception
Oil Shale 190-13	✓ Drilling Unit
<b>✓</b> Water Permit: 43-180	Board Cause No: Cause 139-85
RDCC Review:	Effective Date: 3/11/2010
Fee Surface Agreement	Siting: 4 Prod LGRRV-WSTC Wells
Intent to Commingle	<b>№</b> R649-3-11. Directional Drill
Commingling Approved	

Comments: Presite Completed RIGSKID FR 4301351242:

Stipulations: 4 - Federal Approval - dmason 15 - Directional - dmason 22 - Rigskid - dmason





### State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

### Permit To Drill

\*\*\*\*\*\*

Well Name: 4X-5D-45 BTR
API Well Number: 43013521040000
Lease Number: 1420H626261

Surface Owner: INDIAN Approval Date: 3/21/2013

### Issued to:

BILL BARRETT CORP, 1099 18th Street Ste 2300, Denver, CO 80202

### Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 139-85. The expected producing formation or pool is the GREEN RIVER(LWR)-WASATCH Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

### **Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

All conditions of approval in the Statement of Basis and RDCC comments from (original well name) permit apply to (new well name).

### **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well - contact Carol Daniels at 801-538-5284

(please leave a voicemail message if not available) OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at http://oilgas.ogm.utah.gov

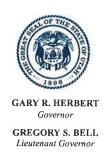
### Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
  - Requests to Change Plans (Form 9) due prior to implementation
  - Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
  - Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas



# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director



April 11, 2013

Brent Murphy Bill Barrett Corp. 1099 18<sup>th</sup> Street Ste. 2300 Denver, CO 80202

Re:

APD Rescinded – 4X-5D-45 BTR, Sec. 5, T. 4S, R. 5W

Duchesne County, Utah API No. 43-013-52104

Dear Mr. Murphy:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on March 21, 2013. On April 11, 2013, you requested that the division rescind the state approved APD. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective April 11, 2013.

A new APD must be filed with this office for approval <u>prior</u> to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason

**Environmental Scientist** 

ian Milyson

cc: Well File

Bureau of Land Management, Vernal





### **United States Department of the Interior**

BUREAU OF LAND MANAGEMENT
Green River District
Vernal Field Office
170 South 500 East
Vernal, UT 84078
http://www.blm.gov/ut/st/en/fo/vernal.html



April 16, 2013

IN REPLY REFER TO: 3160 (UTG011)

Venessa Langmacher Bill Barrett Corporation 1099 18<sup>th</sup> Street, Suite 2300 Denver, CO 80202

Re: Request to Return APD
Well No. 4X-5D-45 BTR
Lot 4, Sec. 5, T4S, R5W
Duchesne County, Utah
Lease No. 14-20-H62-6261

43 013 52/04

#### Dear Venessa:

The Application for Permit to Drill (APD) for the above referenced well received in this office on March 19, 2013, is being returned unapproved per a request by Tracey Fallang to this office in an email message to Land Law Examiner Robin R. Hansen received on April 16, 2013. If you intend to drill at this location at a future date, a new APD must be submitted.

If you have any questions regarding APD processing, please contact Robin R. Hansen at (435) 781-3428.

Sincerely,

/s/ Jerry Kenczka

Jerry Kenczka
Assistant Field Manager
Lands & Resource Minerals

**Enclosures** 

cc:

**UDOGM** 

bcc:

Well File

RECEIVED

MAY 0 1 2013

DIV. OF CIL, CAS & MINING